

=> FILE REG

FILE 'REGISTRY' ENTERED AT 15:21:34 ON 25 SEP 2002  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2002 American Chemical Society (ACS)

Property values tagged with IC are from the ZIC/VINITI data file  
provided by InfoChem.

STRUCTURE FILE UPDATES: 24 SEP 2002 HIGHEST RN 454646-45-8  
DICTIONARY FILE UPDATES: 24 SEP 2002 HIGHEST RN 454646-45-8

TSCA INFORMATION NOW CURRENT THROUGH MAY 20, 2002

Please note that search-term pricing does apply when  
conducting SmartSELECT searches.

Crossover limits have been increased. See HELP CROSSOVER for details.

Experimental and calculated property data are now available. See HELP  
PROPERTIES for more information. See STNote 27, Searching Properties  
in the CAS Registry File, for complete details:  
<http://www.cas.org/ONLINE/STN/STNOTES/stnotes27.pdf>

=> FILE HCAPLUS

FILE 'HCAPLUS' ENTERED AT 15:21:39 ON 25 SEP 2002  
USE IS SUBJECT TO THE TERMS OF YOUR STN CUSTOMER AGREEMENT.  
PLEASE SEE "HELP USAGETERMS" FOR DETAILS.  
COPYRIGHT (C) 2002 AMERICAN CHEMICAL SOCIETY (ACS)

Copyright of the articles to which records in this database refer is  
held by the publishers listed in the PUBLISHER (PB) field (available  
for records published or updated in Chemical Abstracts after December  
26, 1996), unless otherwise indicated in the original publications.  
The CA Lexicon is the copyrighted intellectual property of the  
the American Chemical Society and is provided to assist you in searching  
databases on STN. Any dissemination, distribution, copying, or storing  
of this information, without the prior written consent of CAS, is  
strictly prohibited.

FILE COVERS 1907 - 25 Sep 2002 VOL 137 ISS 13  
FILE LAST UPDATED: 24 Sep 2002 (20020924/ED)

This file contains CAS Registry Numbers for easy and accurate  
substance identification.

CAS roles have been modified effective December 16, 2001. Please  
check your SDI profiles to see if they need to be revised. For  
information on CAS roles, enter HELP ROLES at an arrow prompt or use  
the CAS Roles thesaurus (/RL field) in this file.

=> D QUE

L13 936053 SEA FILE=REGISTRY ABB=ON PMS/CI  
L16 1 SEA FILE=REGISTRY ABB=ON "CRYSTAL VIOLET"/CN  
L17 12028 SEA FILE=REGISTRY ABB=ON L13 AND AMINIUM  
L19 1 SEA FILE=REGISTRY ABB=ON "METHYLENE BLUE"/CN  
L21 341 SEA FILE=REGISTRY ABB=ON L13 AND PHENOTHIAZIN?  
L24 SCR 2040  
L26 50774 SEA FILE=REGISTRY SUB=L13 SSS FUL L24

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

*all polymers in Registry file*

*all polymers with a charge*

L28 36817 SEA FILE=HCAPLUS ABB=ON L26  
 L32 452 SEA FILE=HCAPLUS ABB=ON L28(L) (COLOR? OR DYE?) (L)?POLYMER?  
 L34 325 SEA FILE=HCAPLUS ABB=ON L21  
 L40 13049 SEA FILE=HCAPLUS ABB=ON L28(L) (PREP OR IMF OR SPN)/RL  
 L41 143 SEA FILE=HCAPLUS ABB=ON L32 AND L40  
 L42 3 SEA FILE=HCAPLUS ABB=ON L41 AND LITHOG?  
 L43 13927 SEA FILE=HCAPLUS ABB=ON L17  
 L44 3671 SEA FILE=HCAPLUS ABB=ON L40 AND L43  
 L45 71 SEA FILE=HCAPLUS ABB=ON L32 AND L44  
 L46 2 SEA FILE=HCAPLUS ABB=ON L45 AND LITHOG?  
 L47 3 SEA FILE=REGISTRY ABB=ON "VICTORIA BLUE"/CN  
 L48 1 SEA FILE=REGISTRY ABB=ON "ETHYL VIOLET"/CN  
 L49 4 SEA FILE=REGISTRY ABB=ON MONAZOLINE?/CN  
 L50 1 SEA FILE=REGISTRY ABB=ON "1-ETHYL-2-METHYLQUINOLINIUM  
 IODIDE"/CN  
 L51 1 SEA FILE=REGISTRY ABB=ON "1-ETHYL-4-METHYLQUINOLINIUM  
 IODIDE"/CN  
 L52 1 SEA FILE=REGISTRY ABB=ON "CETYL PYRIDINIUM BROMIDE"/CN  
 L53 1 SEA FILE=REGISTRY ABB=ON "ETHYLVILOGEN DIBROMIDE"/CN  
 L54 78 SEA FILE=REGISTRY ABB=ON SOLVENT ORANGE  
 L61 90 SEA FILE=REGISTRY ABB=ON L47 OR L48 OR L49 OR L50 OR L51 OR  
 L52 OR L53 OR L54  
 L63 739 SEA FILE=HCAPLUS ABB=ON L61(L) RCT/RL  
 L64 1 SEA FILE=HCAPLUS ABB=ON L40 AND L63  
 L65 4 SEA FILE=HCAPLUS ABB=ON L28 AND L63  
 L69 817 SEA FILE=HCAPLUS ABB=ON (L16 OR L19) (L) RCT/RL  
 L70 6 SEA FILE=HCAPLUS ABB=ON L40 AND L69  
 L71 13 SEA FILE=HCAPLUS ABB=ON L64 OR L65 OR L65 OR L70 OR L42 OR  
 L46  
 L72 139 SEA FILE=HCAPLUS ABB=ON L34(L) (PREP OR IMF OR SPN)/RL  
 L73 0 SEA FILE=HCAPLUS ABB=ON L72 AND LITHOG?  
 L74 2 SEA FILE=HCAPLUS ABB=ON L72 AND PRINT?  
 L75 4 SEA FILE=HCAPLUS ABB=ON L72 AND IMAG?  
 L76 19 SEA FILE=HCAPLUS ABB=ON L71 OR L73 OR L74 OR L75  
 L77 2235 SEA FILE=HCAPLUS ABB=ON L40 AND (QUAT?(2A) HETEROCYCL? OR  
 ?QUINOL? OR ?BENZOTHAZOL? OR ?PYRIDIN? OR POLYMETHINE? OR  
 ?CYANINE? )  
 L78 21 SEA FILE=HCAPLUS ABB=ON L77 AND LITHOG?  
 L79 39 SEA FILE=HCAPLUS ABB=ON L76 OR L78  
 L80 18 SEA FILE=HCAPLUS ABB=ON L77 AND PRINT?(3A) (PLATE? OR FORM?)  
 L81 0 SEA FILE=HCAPLUS ABB=ON L77 AND COLOR?(3A) TAG?  
 L82 0 SEA FILE=HCAPLUS ABB=ON L77 AND COLOR?(W) TAG?  
 L83 0 SEA FILE=HCAPLUS ABB=ON L77 AND COLOR?(W) MARK?  
 L84 0 SEA FILE=HCAPLUS ABB=ON L77 AND COLOR?(3A) PENDENT?  
 L85 46 SEA FILE=HCAPLUS ABB=ON (L79 OR L80 OR L81 OR L82 OR L83 OR  
 L84)

=> D L85 ALL 1-46 HITSTR

L85 ANSWER 1 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2002:396501 HCAPLUS  
 DN 136:409051  
 TI Development-free lithographic printing plate  
 with good **printability**  
 IN Hoshi, Satoshi; Kawamura, Koichi; Yamazaki, Sumiaki  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 21 pp.  
 CODEN: JKXXAF  
 DT Patent

LA Japanese  
IC ICM B41N001-14  
ICS G03F007-00; G03F007-004  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
Section cross-reference(s): 38

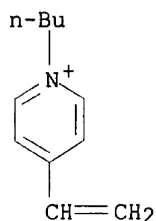
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002154280	A2	20020528	JP 2000-352924	20001120
AB	The plate has a hydrophilic image-recording layer on a support, wherein the layer is changed to be hydrophobic by heat and comprises hydrophilic binder resins contg. precursor polymer particles having hydrophilic graft chains on their surface. A photothermal conversion agent may be contained in the recording layer and/or its neighboring layer. Image is formed on the plate by heat-mode light irradiation.				
ST	<b>lithog printing plate</b> hydrophilic image recording layer; hydrophilic polymer precursor heating hydrophobic <b>printing plate</b>				
IT	<b>Lithographic plates</b> (development-free lithog. printing plate with good <b>printability</b> )				
IT	Polyoxyalkylenes, preparation RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (polystyrene-, graft, image-recording layer component; development-free <b>lithog. printing plate</b> with good <b>printability</b> )				
IT	109584-39-6P, Ethylene oxide-styrene graft copolymer 121287-81-8P, Methyl methacrylate-1-vinyl-2-pyrrolidinone graft copolymer 135142-55-1P, Acrylamide-methyl methacrylate graft copolymer 146277-01-2P, Polyethylene glycol monomethacrylate-styrene graft copolymer 163751-15-3P, tert-Butyl methacrylate-styrene graft copolymer 429340-57-8P, Acetylacetamide-methyl methacrylate graft copolymer <b>429340-63-6P, Styrene-4-vinyl-N-butylpyridinium bromide</b> graft copolymer RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (image-recording layer component; development-free <b>lithog. printing plate</b> with good <b>printability</b> )				
IT	<b>429340-63-6P, Styrene-4-vinyl-N-butylpyridinium bromide</b> graft copolymer RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (image-recording layer component; development-free <b>lithog. printing plate</b> with good <b>printability</b> )				
RN	429340-63-6 HCAPLUS				
CN	Pyridinium, 1-butyl-4-ethenyl-, bromide, polymer with ethenylbenzene, graft (9CI) (CA INDEX NAME)				

CM 1

CFN 1745-93-3

CMF C11 H16 N . Br

● Br<sup>-</sup>

CM 2

CRN 100-42-5

CMF C8 H8

H<sub>2</sub>C=CH-Ph

L85 ANSWER 2 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 2002:396500 HCAPLUS  
 DN 136:409050  
 TI Development-free lithographic printing plate  
 with good printability  
 IN Hoshi, Satoshi; Kawamura, Koichi; Yamazaki, Sumiaki  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM B41N001-14  
 ICS G03F007-00; G03F007-004; G03F007-032; G03F007-11  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002154279	A2	20020528	JP 2000-352908	20001120
AB	The plate has a hydrophilic image-recording layer on a support, wherein the layer is made of polymer particles having hydrophilic graft chains on their surface and changed to be hydrophobic by heat. A photothermal conversion agent may be contained in the recording layer and/or its neighboring layer. Image is formed on the plate by heat-mode light irradsn.				
ST	lithog printing plate hydrophilic image recording layer; hydrophilic polymer precursor heating hydrophobic printing plate				
IT	Lithographic plates (development-free lithog. printing plate with good printability)				
IT	Polyoxyalkylenes, preparation				



RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(polystyrene-, graft, image-recording layer; development-free lithog. printing plate with good printability)

IT 109584-39-6P, Ethylene oxide-styrene graft copolymer 121287-81-8P, Methyl methacrylate-1-vinyl-2-pyrrolidinone graft copolymer 135142-55-1P, Acrylamide-methyl methacrylate graft copolymer 146277-01-2P, Polyethylene glycol monomethacrylate-styrene graft copolymer 163751-15-3P, tert-Butyl methacrylate-styrene graft copolymer 429340-57-8P **429340-63-6P**, Styrene-1-Butyl-4-

**vinylpyridinium** bromide graft copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(image-recording layer; development-free lithog. printing plate with good printability)

IT **429340-63-6P**, Styrene-1-Butyl-4-**vinylpyridinium** bromide graft copolymer

RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)

(image-recording layer; development-free lithog. printing plate with good printability)

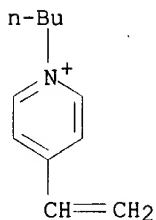
RN 429340-63-6 HCAPLUS

CN Pyridinium, 1-butyl-4-ethenyl-, bromide, polymer with ethenylbenzene, graft (9CI) (CA INDEX NAME)

CM 1

CRN 1745-93-3

CMF C11 H16 N . Br



● Br<sup>-</sup>

CM 2

CRN 100-42-5

CMF C8 H8

H<sub>2</sub>C=CH-Ph

L85 ANSWER 3 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 2002:253298 HCAPLUS

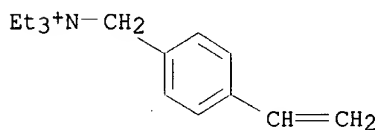
KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

DN 136:286628  
 TI Image-recording material and lithographic printing  
 plate using the same  
 IN Shibuya, Akinori; Kunita, Kazuto; Oshima, Yasuhito  
 PA Fuji Photo Film Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 67 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-11  
 ICS G03F007-00; G03F007-027; G03F007-028; G03F007-032; G03F007-09;  
 G03F007-095  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 35, 38, 41  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2002099094	A2	20020405	JP 2000-288940	20000922

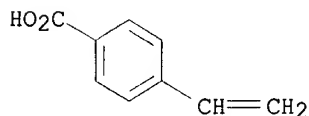
AB The invention relates to an image-recording material suitable for a CTP  
 system. The image-recording material comprises on a support a  
 photopolymerizable layer contg. a photopolymn initiator, a sensitizing  
 dye, an addn. polymerizable ethylenic compd., and a polymer binder and an  
 intermediate layer contg. a photopolymn. initiator. The photopolymn.  
 initiator in the intermediate layer is able to interact with the  
 hydrophilic Al support. The lithog. printing  
 plate using above image-forming material is also claimed.  
 ST computer to plate lithog printing  
 plate  
 IT Lithographic plates  
 (image-recording material for lithog. printing  
 plate)  
 IT Polyesters, uses  
 Polyurethanes, uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (image-recording material for lithog. printing  
 plate)  
 IT 3712-60-5 25183-63-5 246540-24-9  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (IR dye; image-recording material for lithog.  
 printing plate)  
 IT 106-96-7DP, Propargylbromide, reaction product with  
 poly((dimethylamino)ethyl methacrylate) 1592-20-7DP,  
 4-(Chloromethyl)styrene, reaction products with poly(4-  
 vinylpyridine) 2867-47-2DP, 2-(Dimethylamino)ethyl methacrylate,  
 reaction product with poly(chloromethylstyrene) 9080-67-5DP,  
 Poly(chloromethylstyrene), reaction product with 2-(dimethylamino)ethyl  
 methacrylate 25154-86-3DP, Poly((dimethylamino)ethyl methacrylate),  
 propargylbromide 25232-41-1DP, Poly(4-vinylpyridine), reaction  
 products with 4-(chloromethyl)styrene 30674-80-7DP, reaction products  
 with -vinylbenzoic acid-(4-vinylbenzyl)triethyl ammonium chloride  
 copolymer 53160-51-3P, Acrylic acid-allyl methacrylate copolymer  
 220227-02-1DP, reaction products with 2-  
 (methacryloyoxy)ethylisocyanate 371971-09-4P, 4-Vinylbenzoic  
 acid-(4-vinylbenzyl)triethyl ammonium chloride copolymer, ester with  
 glycidyl methacrylate  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered  
 material use); PREP (Preparation); USES (Uses)  
 (image-recording material for lithog. printing  
 plate)

IT 51763-07-6 138569-95-6 293329-40-5 305369-28-2 305369-32-8  
371229-72-0 406679-92-3 406679-94-5 406679-95-6 406679-96-7  
RL: TEM (Technical or engineered material use); USES (Uses)  
(sensitizing dye; image-recording material for lithog.  
printing plate)  
IT 7429-90-5, Aluminum, uses  
RL: DEV (Device component use); USES (Uses)  
(support for lithog. printing plate)  
IT 220227-02-1DP, reaction products with 2-  
(methacryloyoxy)ethylisocyanate 371971-09-4P, 4-Vinylbenzoic  
acid-(4-vinylbenzyl)triethyl ammonium chloride copolymer, ester with  
glycidyl methacrylate  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(image-recording material for lithog. printing  
plate)  
RN 220227-02-1 HCAPLUS  
CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer with  
4-ethenylbenzoic acid (9CI) (CA INDEX NAME)  
CM 1  
CRN 14350-43-7  
CMF C15 H24 N . Cl



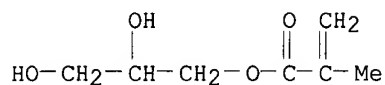
● Cl<sup>-</sup>

CM 2  
CRN 1075-49-6  
CMF C9 H8 O2



RN 371971-09-4 HCAPLUS  
CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer with  
4-ethenylbenzoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl  
ester (9CI) (CA INDEX NAME)  
CM 1  
CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 220227-02-1

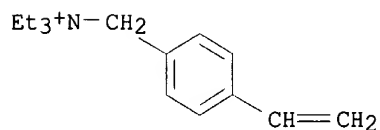
CMF (C15 H24 N . C9 H8 O2 . Cl)x

CCI PMS

CM 3

CRN 14350-43-7

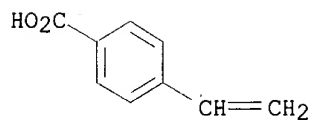
CMF C15 H24 N . Cl

● Cl<sup>-</sup>

CM 4

CRN 1075-49-6

CMF C9 H8 O2



L85 ANSWER 4 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 2001:814265 HCAPLUS  
DN 135:350606  
TI Negative-working lithographic printing plates  
with excellent interlayer adhesion and image reproducibility  
IN Shimada, Kazuto; Oshima, Yasuhito; Kunida, Kazuto  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 27 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-11

ICS B41N001-14; G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001312068	A2	20011109	JP 2000-132478	20000501
AB	The plates for heat-mode recording, have (a) hydrophilized supports, (b) middle layers contg. radically polymerizable compds., and (C) IR laser-recordable photosensitive layers contg. IR absorbers, polymn. initiators, and compds. having polymerizable unsatd. groups, in this order. The radically polymerizable compds. may also have cationic groups.				
ST	presensitized lithog printing plate heat mode; cationic polymer middle layer interlayer adhesion; IR laser exposure neg lithog printing				
IT	Optical materials (IR absorbers, photosensitive layer contg.; presensitized lithog. printing plates having cationic polymer-contg. middle layers for IR laser exposure)				
IT	IR materials (absorbers, photosensitive layer contg.; presensitized lithog . printing plates having cationic polymer-contg. middle layers for IR laser exposure)				
IT	Lithographic plates (neg.-working presensitized; presensitized lithog. printing plates having cationic polymer-contg. middle layers for IR laser exposure)				
IT	134127-48-3	173783-73-8	244606-76-6		
	RL: DEV (Device component use); USES (Uses) (IR absorber, photosensitive layer contg.; presensitized lithog . printing plates having cationic polymer-contg. middle layers for IR laser exposure)				
IT	106-96-7DP, Propargyl bromide, reaction products with polydimethylaminoethyl methacrylate 109-73-9DP, n-Butylamine, reaction products with polychloromethylstyrene and dimethylaminoethyl methacrylate 2867-47-2DP, 2-(Dimethylamino)ethyl methacrylate, reaction products with polychloromethylstyrene and butylamine 9080-67-5DP, Poly(chloromethylstyrene), reaction products with dimethylaminoethyl methacrylate and butylamine 25154-86-3DP, Poly[(dimethylamino)ethyl methacrylate], reaction products with propargyl bromide 30674-80-7DP, 2-(Methacryloyloxy)ethyl isocyanate, reaction products with triethylvinylbenzylammonium chloride-vinylbenzoic acid copolymer 120832-05-5P, Poly(4-vinylpyridine) salt with (chloromethyl)styrene 220227-02-1DP, Triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer, reaction products with methacryloyloxyethyl isocyanate 371966-25-5P, Allyl methacrylate-methacrylic acid-[2-(methacryloyloxy)ethyl]trimethylamm onium methanesulfonate copolymer 371966-27-7P, N,N-Dimethylacetamide; (4-vinylbenzyl)triallylammonium hexafluorophosphate copolymer 371971-09-4P, Triethyl(4-vinylbenzyl)ammonium chloride-4-vinylbenzoic acid copolymer ester with glycidyl methacrylate RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses) (middle layer; presensitized lithog. printing plates having cationic polymer-contg. middle layers for IR laser exposure)				
IT	4986-89-4, Pentaerythritol tetraacrylate 139385-71-0, Glycerin dimethacrylate-hexamethylene diisocyanate copolymer RL: DEV (Device component use); USES (Uses) (photosensitive layer; presensitized lithog. printing				

**plates** having cationic polymer-contg. middle layers for IR laser exposure)

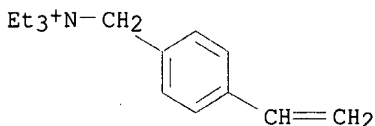
IT 37321-70-3D, JIS 1050, anodized  
 RL: DEV (Device component use); USES (Uses)  
 (support; presensitized **lithog. printing**  
**plates** having cationic polymer-contg. middle layers for IR laser exposure)

IT 220227-02-1DP, Triethyl(p-vinylbenzyl)ammonium chloride-p-vinylbenzoic acid copolymer, reaction products with methacryloyloxyethyl isocyanate 371966-25-5P, Allyl methacrylate-methacrylic acid-[2-(methacryloyloxy)ethyl]trimethylammonium methanesulfonate copolymer 371966-27-7P, N,N-Dimethylacetamide; (4-vinylbenzyl)triallylammonium hexafluorophosphate copolymer 371971-09-4P, Triethyl(4-vinylbenzyl)ammonium chloride-4-vinylbenzoic acid copolymer ester with glycidyl methacrylate  
 RL: DEV (Device component use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)  
 (middle layer; presensitized **lithog. printing**  
**plates** having cationic polymer-contg. middle layers for IR laser exposure)

RN 220227-02-1 HCAPLUS  
 CN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer with 4-ethenylbenzoic acid (9CI) (CA INDEX NAME)

CM 1

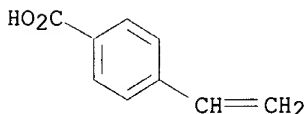
CRN 14350-43-7  
 CMF C15 H24 N . Cl



● Cl<sup>-</sup>

CM 2

CRN 1075-49-6  
 CMF C9 H8 O2

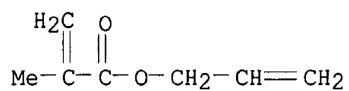


RN 371966-25-5 HCAPLUS  
 CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, methyl sulfate, polymer with 2-methyl-2-propenoic acid and 2-propenyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 96-05-9

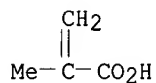
CMF C7 H10 O2



CM 2

CRN 79-41-4

CMF C4 H6 O2



CM 3

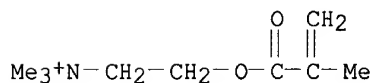
CRN 6891-44-7

CMF C9 H18 N O2 . C H3 O4 S

CM 4

CRN 33611-56-2

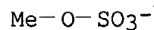
CMF C9 H18 N O2



CM 5

CRN 21228-90-0

CMF C H3 O4 S



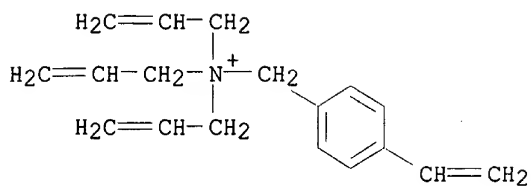
RN 371966-27-7 HCAPLUS

CN Benzenemethanaminium, 4-ethenyl-N,N,N-tri-2-propenyl-, hexafluorophosphate(1-), homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 157424-95-8

CMF C18 H24 N

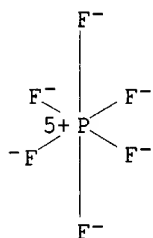


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



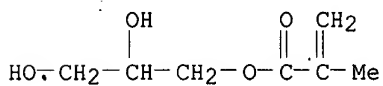
RN 371971-09-4 HCAPLUS

CRN Benzenemethanaminium, 4-ethenyl-N,N,N-triethyl-, chloride, polymer with  
 4-ethenylbenzoic acid, 2-hydroxy-3-[(2-methyl-1-oxo-2-propenyl)oxy]propyl  
 ester (9CI) (CA INDEX NAME)

CM 1

CRN 5919-74-4

CMF C7 H12 O4



CM 2

CRN 220227-02-1

CMF (C15 H24 N . C9 H8 O2 . Cl)x

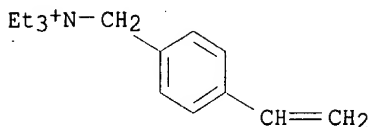
CCI PMS

CM 3

CRN 14350-43-7

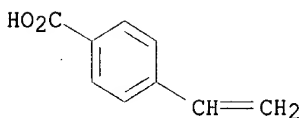
CMF C15 H24 N . Cl



● Cl<sup>-</sup>

CM 4

CRN 1075-49-6  
CMF C9 H8 O2

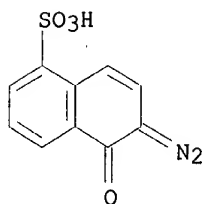


L85 ANSWER 5 OF 46 HCAPLUS COPYRIGHT 2002/ACS  
 AN 2001:814264 HCAPLUS  
 DN 135:350565  
 TI Positive-working photoresist composition suitable for fabrication of  
 magnetoresistive heads, copper or iron-nickel alloy substrate having  
 photosensitive film, and its pattern formation  
 IN Masuda, Yasuo; Katano, Akira; Doi, Kosuke; Ohara, Hidekatsu  
 PA Tokyo Ohka Kogyo Co., Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 13 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03F007-085  
 ICS C08L061-14; G03F007-023  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 38, 77

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001312066	A2	20011109	JP 2000-132405	20000501
OS	MARPAT 135:350565				
AB	The photoresist compn. contains an alkali-sol. novolak resin whose phenolic hydroxyl groups are partially esterified with 1,2-naphthoquinonediazide sulfonyl group, and an arom. N-contg. heterocycle. A Cu or Fe-Ni alloy substrate having a photosensitive film of .gtoreq.3.0 .mu.m thickness made from the compn. is claimed. The photosensitive film of .gtoreq.6.0 .mu.m thickness is image-wise patterned with i-line (365 nm) and developed to give .ltoreq.0.8 .mu.m line-and-space pattern. Addn. of the heterocycle remarkably improves adhesion of the photoresist to the substrate, so that the resist compn. is suitable for fabrication of giant magnetoresistive heads and				

- magnetoresistive heads.
- ST novolak photoresist compn additive heterocycle adhesion improvement; arom heterocycle addn novolak photoresist adhesion improvement; giant magnetoresistive head fabrication novolak photoresist; magnetic recording head fabrication novolak photoresist; copper substrate novolak pos photoresist; iron nickel alloy substrate novolak pos photoresist; **lithog** pos novolak photoresist adhesion improvement
- IT Heterocyclic compounds  
RL: MOA (Modifier or additive use); USES (Uses)  
(arom.; pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT Aromatic compounds  
RL: MOA (Modifier or additive use); USES (Uses)  
(heterocyclic; pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT Phenolic resins, preparation  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(novolak; pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT **Lithography**  
Positive photoresists  
(pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT 103-74-2, 2-(2-Hydroxyethyl)**pyridine** 29565-76-2, 2-**Hydroxyethylpyridine**  
RL: MOA (Modifier or additive use); USES (Uses)  
(pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT **202148-85-4P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT 7440-50-8, Copper, uses 11148-32-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(substrate; pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- IT **202148-85-4P**  
RL: PNU (Preparation, unclassified); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(pos.-working photoresist compn., and Cu or Fe-Ni alloy substrate having photoresist film suitable for fabrication of magnetic recording heads)
- RN 202148-85-4 HCAPLUS  
CN Formaldehyde, polymer with 3-methylphenol, 4-methylphenol and 2,3,5-trimethylphenol, 6-diazo-5,6-dihydro-5-oxo-1-naphthalenesulfonate (9CI) (CA INDEX NAME)
- CM 1
- CRN 20546-03-6  
CMF C10 H6 N2 O4 S



CM 2

CRN 123236-78-2

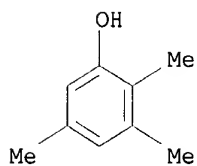
CMF (C9 H12 O . C7 H8 O . C7 H8 O . C H2 O)x

CCI PMS

CM 3

CRN 697-82-5

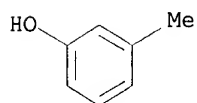
CMF C9 H12 O



CM 4

CRN 108-39-4

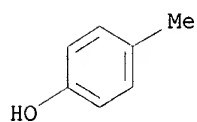
CMF C7 H8 O



CM 5

CRN 106-44-5

CMF C7 H8 O



CM 6

CRN 50-00-0

CMF C H2 O

 $H_2C=O$ 

L85 ANSWER 6 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 2001:705943 HCAPLUS  
DN 136:6463  
TI Electrochemical copolymerization of aniline and azure B  
AU Shan, Dan; Mu, Shao-Lin; Mao, Bing-Wei; Li, Yong-Fang  
CS Department of Chemistry, School of Science, Yangzhou University, Yangzhou,  
225002, Peop. Rep. China  
SO Chinese Journal of Polymer Science (2001), 19(5), 483-492  
CODEN: CJPSEG; ISSN: 0256-7679  
PB Springer-Verlag  
DT Journal  
LA English  
CC 35-7 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 41, 72, 73  
AB The electrochem. copolymn. of aniline and N,N,N'-trimethylthionin (azure B) in aq. solns. has been carried out using the potential sweep method. The optimum conditions for the coelectrodeposition are that the pH value and the temp. of the electrolytic soln. are controlled at 5.57 and 30.degree.C, resp., and the scan potential range is set between -0.25 and 1.10 V (vs. SCE). The copolymn. rate of aniline and azure B is about 3 times larger than that of aniline in the absence of azure B. The copolymn. of aniline and azure B was verified from the results of visible spectra during electrolysis, FTIR spectra and the at. force microscopy (AFM) images of the polymers. The in situ visible spectrum for the electrolysis of the soln. contg. aniline and azure B is different from that of the resp. aniline and azure B. The FTIR spectrum of the copolymer is not a superposition of that of polyaniline and poly(azure B). The AFM image of the copolymer is different from those of polyaniline and poly(azure B) and is not a mixt. of individual polymers. The cond. of the copolymer synthesized at pH 5.57 is four orders of magnitude higher than that of polyaniline synthesized under the same conditions, but in the absence of azure B. The electrochem. properties of the copolymer are mainly attributed to polyaniline, but the copolymer has a better electrochem. reversibility and a much faster charge transfer than those of polyaniline.  
ST aniline azure B dye electropolymn  
IT pH  
(effect on aniline-azure B copolymer electrochem. prepn.)  
IT Polyanilines  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(electrochem. prepn. and spectra of aniline-azure B copolymer)  
IT Polymerization  
(electrochem.; electrochem. prepn. and spectra of aniline-azure B copolymer)  
IT Cyclic voltammetry  
(in aniline-azure B copolymer prepn.)  
IT Binding energy  
Electric conductivity  
UV and visible spectra

(of aniline-azure B copolymer)  
IT 374777-76-1P, Aniline-azure B copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP  
(Preparation)  
(electrochem. prepn. and spectra of)  
RE.CNT 26 THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Desilvestro, J; J Chem Soc Chem Commun 1985, P346
- (2) Dong, Y; Electrochim Acta 1991, V36, P2015 HCAPLUS
- (3) Fusalba, F; J Phys Chem B 1999, V103, P9044 HCAPLUS
- (4) Genies, E; J Appl Electrochem 1998, V18, P751
- (5) Gningue, D; J Electrochem Soc 1988, V135, P1695 HCAPLUS
- (6) Gospodinova, N; Prog Polym Sci 1998, V23, P1443 HCAPLUS
- (7) Huang, W; J Chem Soc Faraday Trans 1 1986, V82, P2385 HCAPLUS
- (8) Inganas, O; Synth Met 1985, V11, P239
- (9) Kan, J; Synth Met 1997, V87, P205 HCAPLUS
- (10) Kang, E; Surface and Interface Analysis 1993, V20, P833 HCAPLUS
- (11) Kim, H; Synth Met 1988, V26, P49
- (12) Kobayashi, T; J Electroanal Chem 1984, V177, P281 HCAPLUS
- (13) Kuwabata, S; J Electrochem Soc 1988, V135, P1691 HCAPLUS
- (14) Laborde, H; J Appl Electrochem 1990, V20, P524 HCAPLUS
- (15) MacDiarmid, A; Synth Met 1991, V41-43, P621
- (16) Pei, Q; Synth Met 1991, V45, P35 HCAPLUS
- (17) Ruckenstein, E; Synth Met 1993, V53, P283 HCAPLUS
- (18) San, B; Synth Met 1998, V94, P221
- (19) Sanchez, M; J Appl Electrochem 1997, V27, P831
- (20) Shan, D; Chinese Journal of Polymer Science in press
- (21) Shan, D; Electroanalysis in press
- (22) Tang, J; Synth Met 1988, V24, P231 HCAPLUS
- (23) Wan, X; J Electroanal Chem 1999, V470, P23 HCAPLUS
- (24) Wang, B; Synth Met 1986, V13, P329 HCAPLUS
- (25) Wang, H; Sensors and Actuators B 1999, V56, P22
- (26) Zotti, G; Chem Mater 1998, V10, P480 HCAPLUS

IT 374777-76-1P, Aniline-azure B copolymer  
RL: PRP (Properties); SPN (Synthetic preparation); PREP  
(Preparation)  
(electrochem. prepn. and spectra of)

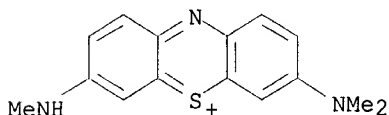
RN 374777-76-1 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-(methylamino)-, chloride, polymer  
with benzenamine (9CI) (CA INDEX NAME)

CM 1

CRN 531-55-5

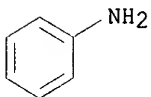
CMF C15 H16 N3 S . Cl



Cl<sup>-</sup>

CM 2

CRN 62-53-3  
CMF C6 H7 N



L85 ANSWER 7 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:589711 HCAPLUS

DN 135:173028

TI Thermosensitive ionomer compositions containing oxonol IR dyes, their image-forming members, and their image **formation** and **printing** processes

IN Dominh, Thap; Zheng, Shiyang; Williams, Kevin W.

PA Eastman Kodak Co., USA

SO Jpn. Kokai Tokkyo Koho, 39 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM B41N001-14

ICS C08K005-315; C08L101-00; C09K003-00; G03F007-004; C09B023-00

CC 74-7 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001219667	A2	20010814	JP 2000-355491	20001122
	<u>US 6423469</u>	B1	20020723	US 1999-444695	<u>19991122</u>
	DE 10053721	A1	20010830	DE 2000-10053721	20001030
	GB 2358710	A1	20010801	GB 2000-27723	20001114
PRAI	US 1999-444695	A	19991122		

OS MARPAT 135:173028

AB The compns. contain (a) hydrophilic thermosensitive ionomers, (b) water or water-miscible org. solvents, and (c) oxonol-type IR dyes sol. in water or the solvents and having  $\lambda_{max}$  longer than 700 nm. The image-forming members having high photothermal conversion efficiency involve supports having hydrophilic image-forming layers of the compns. The printing process involves (i) image formation involving a step of prepg. the image-forming members and a step of imagewise exposure of the members to provide exposed and unexposed regions in the image-forming layers, the heat provided by the exposure making the exposed regions become more hydrophilic than the unexposed regions, and (ii) a step of contacting the imagewise exposed image-forming members with lithog. **printing inks** and transferring the inks from the members to receptor materials imagewise.

ST thermosensitive ionomer oxonol IR dye printing; thiosulfate polymer thermosensitive printing oxonol IR dye; photothermal conversion thermosensitive ionomer oxonol dye

IT Dyes

(IR-absorbing, oxonols; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT Ionene polymers

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(hydrophilic, thermosensitive; thermosensitive ionomer compns. contg.

oxonol IR dyes for printing members)

IT Thermographic copying  
(thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT Polyoxyphenylenes  
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)  
(thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 129587-84-4P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate for monomers; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 149976-02-3P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(intermediate in dye prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 31134-43-7P, Vinylbenzyl bromide  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(intermediates in monomer prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 66-27-3, Methyl methanesulfonate 1072-63-5, 1-Vinylimidazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(monomer prepn. from; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 7268-68-0P 30030-25-2DP, thiosulfate sodium salt 264255-37-0P 354578-44-2P 354584-57-9P  
RL: PNU (Preparation, unclassified); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(monomers; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 39198-78-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactants in dye prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 77-78-1, Dimethyl sulfate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reactants in monomer prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 17576-35-1 101685-29-4  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting material in dye prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 5188-07-8, Sodium methanethiolate 14216-23-0, 2-(Methylthio)ethyl methacrylate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting materials for monomers; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 30030-25-2  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(starting materials in monomer prepn.; thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 344908-19-6 344911-67-7 344911-71-3 354577-84-7 354577-86-9  
354577-88-1 354577-90-5 354577-92-7 354577-94-9 354577-96-1  
354577-98-3 354578-00-0 354578-02-2 354578-04-4 354578-06-6  
354578-08-8 354578-10-2 354578-11-3 354578-13-5 354578-14-6  
354578-15-7 354578-17-9 354578-19-1 354578-21-5 354578-23-7

354578-25-9 354578-27-1 354578-29-3 354578-31-7 354578-33-9  
354578-34-0 354578-36-2 354578-38-4

RL: DEV (Device component use); USES (Uses)

(thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 80-62-6DP, Methyl methacrylate, copolymer with vinylbenzyl chloride, reaction products with thiosulfate sodium salt 106-91-2DP, Glycidyl methacrylate, polymer with methacryloyloxyethyl acetoacetate, thiosulfate sodium salt 21282-97-3DP, 2-Methacryloyloxyethyl acetoacetate, polymer with glycidyl methacrylate thiosulfate sodium salt 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction products with di-Me sulfate 24969-06-0DP, Poly(epichlorohydrin), thiosulfate sodium salt 25134-01-4DP, Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction products with di-Me sulfate 25212-74-2DP, Poly(thio-1,4-phenylene), reaction products with methanesulfonic acid and Me triflate, Na salt, ion-exchanged, chloride 26100-41-4P, Methyl methacrylate-4-vinylpyridine copolymer 26937-47-3DP, 2-Chloroethyl methacrylate homopolymer, thiosulfate sodium salt 72607-53-5DP, N-(3-Aminopropyl)methacrylamide hydrochloride, vinylbenzyl thiosulfate sodium salt copolymer 115708-89-9P, Poly(p-xylylene-tetrahydrothiophenium chloride) 263551-57-1P 264255-38-1DP, N-(3-Aminopropyl)methacrylamide hydrochloride-1-vinyl-3-methylimidazolinium methanesulfonate copolymer, ion-exchanged, chloride 304023-76-5P 306767-46-4P, N-(3-Aminopropyl)methacrylamide hydrochloride-vinylbenzyltrimethylammonium chloride copolymer 318235-77-7P 354578-39-5DP, ion-exchanged, fluoride 354578-39-5P 354578-40-8P 354580-74-8P 354584-60-4P

RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

IT 115708-89-9P, Poly(p-xylylene-tetrahydrothiophenium chloride) 263551-57-1P 264255-38-1DP, N-(3-Aminopropyl)methacrylamide hydrochloride-1-vinyl-3-methylimidazolinium methanesulfonate copolymer, ion-exchanged, chloride 304023-76-5P 306767-46-4P, N-(3-Aminopropyl)methacrylamide hydrochloride-vinylbenzyltrimethylammonium chloride copolymer 354578-39-5DP, ion-exchanged, fluoride 354578-39-5P 354578-40-8P 354584-60-4P

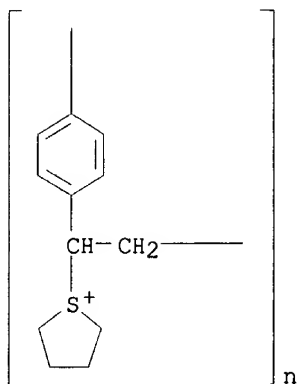
RL: DEV (Device component use); PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(thermosensitive ionomer compns. contg. oxonol IR dyes for printing members)

RN 115708-89-9 HCAPLUS

CN Poly[1,4-phenylene[1-(tetrahydrothiophenio)-1,2-ethanediyl] chloride] (9CI) (CA INDEX NAME)

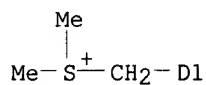
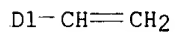




RN 263551-57-1 HCAPLUS  
 CN Sulfonium, [(ethenylphenyl)methyl]dimethyl-, methyl sulfate, homopolymer  
 (9CI) (CA INDEX NAME)

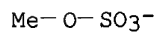
CM 1

CRN 31094-38-9  
 CMF C11 H15 S  
 CCI IDS



CM 2

CRN 21228-90-0  
 CMF C H3 O4 S



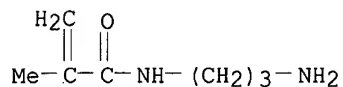
RN 264255-38-1 HCAPLUS  
 CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with

N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

CM 2

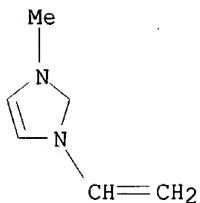
CRN 264255-37-0

CMF C6 H9 N2 . C H3 O3 S

CM 3

CRN 45534-45-0

CMF C6 H9 N2

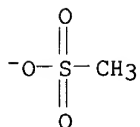


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 16053-58-0

CMF C H3 O3 S



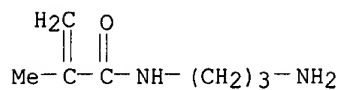
RN 304023-76-5 HCAPLUS

CN Sulfonium, dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, methyl sulfate, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

CM 2

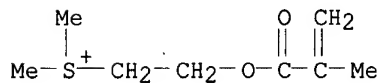
CRN 7268-68-0

CMF C8 H15 O2 S . C H3 O4 S

CM 3

CRN 44992-92-9

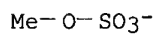
CMF C8 H15 O2 S



CM 4

CRN 21228-90-0

CMF C H3 O4 S



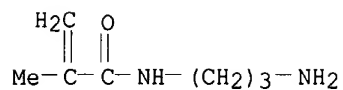
RN 306767-46-4 HCAPLUS

CN Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



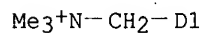
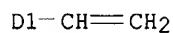
● HCl

CM 2

CRN 26616-35-3

CMF C12 H18 N . Cl

CCI IDS

● Cl<sup>-</sup>

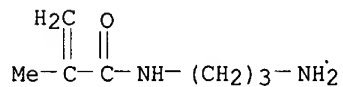
RN 354578-39-5 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-,  
chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

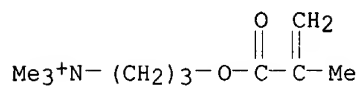
CMF C7 H14 N2 O . Cl H



HCl

CM 2

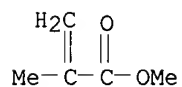
CRN 55918-38-2  
CMF C10 H20 N O2 . Cl



● Cl<sup>-</sup>

CM 3

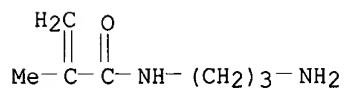
CRN 80-62-6  
CMF C5 H8 O2



RN 354578-39-5 HCAPLUS  
CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-,  
chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

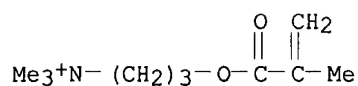
CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

CM 2

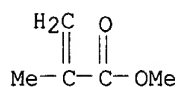
CRN 55918-38-2  
CMF C10 H20 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 80-62-6

CMF C5 H8 O2



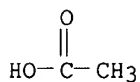
RN 354578-40-8 HCAPLUS

CN 1-Propanaminium, N,N,N-trimethyl-3-[(2-methyl-1-oxo-2-propenyl)oxy]-,  
chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride and methyl 2-methyl-2-propenoate, acetate (9CI) (CA  
INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 354578-39-5

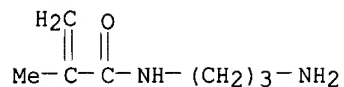
CMF (C10 H20 N O2 . C7 H14 N2 O . C5 H8 O2 . Cl H . Cl)x

CCI PMS

CM 3

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H

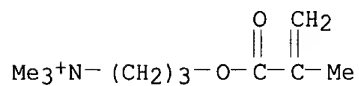


● HCl

CM 4

CRN 55918-38-2

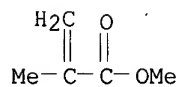
CMF C10 H20 N O2 . Cl

● Cl<sup>-</sup>

CM 5

CRN 80-62-6

CMF C5 H8 O2



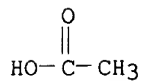
RN 354584-60-4 HCAPLUS

CN Phosphonium, [(ethenylphenyl)methyl]trimethyl-, bromide, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride, acetate (9CI)  
(CA INDEX NAME)

CM 1

CRN 64-19-7

CMF C2 H4 O2



CM 2

CRN 312966-33-9

CMF (C12 H18 P . C7 H14 N2 O . Br . Cl H)x  
CCI PMS

CM 3

CRN 312965-31-4  
CMF C12 H18 P . Br  
CCI IDS



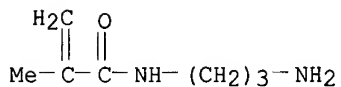
D1-CH=CH<sub>2</sub>

Me<sub>3</sub><sup>+</sup>P-CH<sub>2</sub>-D1

● Br<sup>-</sup>

CM 4

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

L85 ANSWER 8 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:356528 HCAPLUS

DN 134:374064

TI Light-sensitive resin composition containing polyvinyl acetate dispersion medium and crosslinking dispersoid and method for production of rotary screen **printing** original **plate** using same

IN Kaneda, Sadayoshi; Yoshizawa, Kaizan; Kanetani, Yoshiyuki

PA Murakami Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 19 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-038



ICS B05D001-26; B05D007-24; C08F002-44; C08F002-50; C08G018-00;  
C08K005-29; C08L029-04; C08L079-00; C08L101-00; G03F007-004;  
G03F007-021; G03F007-12; G03F007-40

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 2001133976	A2	20010518	JP 1999-315468	19991105
AB	The title resin compn. contains a water-sol. sapond. polyvinyl acetate dispersion medium and a water hardly sol. or insol. heat-crosslinking dispersoid, wherein the polyvinyl acetate dispersion medium contains a <b>styrylpyridinium</b> or styryl <b>quinolinium</b> group and is .gtoreq.50 mol% sapond. The resin compn., which contains the polyvinyl acetate, provides the improved water- and org. solvent resistance and the high printing durability.				
ST	light sensitive resin compn dispersion medium crosslinking dispersoid rotary; screen <b>printing plate</b> compn dispersion medium crosslinking dispersoid rotary				
IT	Light-sensitive materials (light-sensitive resin compn. contg. polyvinyl acetate and method for prodn. of screen <b>printing</b> original <b>plate</b> using same)				
IT	<b>Printing plates</b> (screen; light-sensitive resin compn. contg. polyvinyl acetate and method for prodn. of screen <b>printing</b> original <b>plate</b> using same)				
IT	9003-20-7D, Poly(vinyl acetate), partially sapond. RL: MSC (Miscellaneous) (dispersion medium in light-sensitive resin compn.)				
IT	9003-20-7DP, Poly(vinyl acetate), partially sapond., reaction product with <b>arylquinolium</b> <b>9070-36-4P</b> 78521-11-6DP, (4-Formylstyryl)-N- <b>methylquinolium</b> , salt with dimethylsulfate, adduct with partially sapond. vinyl acetate polymer RL: <b>SPN (Synthetic preparation)</b> ; TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; <b>USES (Uses)</b> (dispersion medium in light-sensitive resin compn.)				
IT	77-78-1D, Dimethylsulfate, salt with <b>pyridinium</b> deriv. 73264-13-8D, (4-Formylstyryl)-N- <b>methylpyridinium</b> , salt with dimethylsulfate RL: TEM (Technical or engineered material use); <b>USES (Uses)</b> (dispersion medium in light-sensitive resin compn.)				
IT	<b>9070-36-4P</b> RL: <b>SPN (Synthetic preparation)</b> ; TEM (Technical or engineered material use); <b>PREP (Preparation)</b> ; <b>USES (Uses)</b> (dispersion medium in light-sensitive resin compn.)				
RN	9070-36-4 HCAPLUS				
CN	Benzenediazonium, 4-(phenylamino)-, sulfate (2:1), polymer with formaldehyde (9CI) (CA INDEX NAME)				

CM 1

CRN 50-00-0

CMF C H2 O

H2C=O

CM 2

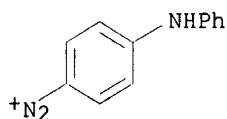
CRN 150-33-4

CMF C12 H10 N3 . 1/2 O4 S

CM 3

CRN 16072-57-4

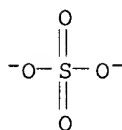
CMF C12 H10 N3



CM 4

CRN 14808-79-8

CMF O4 S



L85 ANSWER 9 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:231943 HCAPLUS

DN 135:11484

TI Growth of poly(methylene blue) film and properties of the film

AU Liu, Jin-cui; Mu, Shao-lin; Li, Yong-fang

CS Department of Chemistry, School of Sciences, Yangzhou University, Shouxi Lake Campus, Yangzhou, 225002, Peop. Rep. China

SO Wuli Huaxue Xuebao (2001), 17(3), 229-233

CODEN: WHXUEU; ISSN: 1000-6818

PB Beijing Daxue Chubanshe

DT Journal

LA Chinese

CC 72-2 (Electrochemistry)

Section cross-reference(s): 35, 36, 41

AB The in situ spectroelectrochem. expt. shows that an absorption peak at 580.5 nm attributable to poly(methylene blue) grows slowly at the beginning of the electrolysis of methylene blue, and then this peak grows more quickly. The visible spectra prove that there are two absorption peaks at 580.5 and 690.2 nm resp. for the mixt. soln. after electrolysis. The former one indicates that poly(methylene blue) polyimd. on the ITO electrode is partly sol.; the latter one is attributed to a water-sol. polymer since it completely dissolves in the aq. soln. The result from the rotating ring-disk electrode identifies that an intermediate is produced at the disk electrode, which is collected at the ring electrode. The ring current increases with decreasing the ring potential and with increasing the rotation rate. Thus, the intermediate is a species carrying a pos. charge and not too stable. The result from the XPS expt.

shows that the anions can be doped into poly (methylene blue) film and dedoped from it during oxidn. and redn. processes. The results from the impedance expt. indicate that the charge transfer impedance of poly(methylene blue) decreases with decreasing potential.

ST polymethylene blue in situ spectroelectrochem; rotating ring disk electrode polymethylene blue; impedance polymethylene blue

IT Polymerization  
Redox reaction  
(electrochem.; growth and properties of poly(methylene blue) film)

IT Electrolysis  
Electron transfer  
(growth and properties of poly(methylene blue) film)

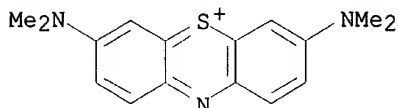
IT 61-73-4, Methylene blue  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(growth and properties of poly(methylene blue) film)

IT 150645-86-6P, Poly(methylene blue)  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(growth and properties of poly(methylene blue) film)

IT 61-73-4, Methylene blue  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
(growth and properties of poly(methylene blue) film)

RN 61-73-4 HCAPLUS

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

IT 150645-86-6P, Poly(methylene blue)  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(growth and properties of poly(methylene blue) film)

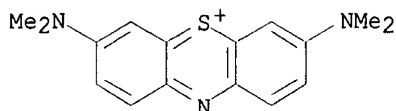
RN 150645-86-6 HCAPLUS

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 61-73-4

CMF C16 H18 N3 S . Cl



● Cl<sup>-</sup>

L85 ANSWER 10 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:165716 HCAPLUS

DN 134:214934

TI Thermal imaging composition as well as direct write lithographic printing plate containing cationic IR dye, and method of imaging and printing

IN Felming, James C.; Leon, Jeffrey W.; Stegman, David A.; Williams, Kevin W.

PA Eastman Kodak Co., USA

SO Ger. Offen., 26 pp.

CODEN: GWXXBX

DT Patent

LA German

IC ICM G03F007-09

ICS B41C001-10; B41F007-02; B41M001-14; B41C001-00; B41C001-055

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 10042293	A1	20010308	DE 2000-10042293	20000829
	US 6410202	B1	20020625	US 1999-387116	19990831
	JP 2001162965	A2	20010619	JP 2000-306855	20000831
PRAI	US 1999-387116	A	19990831		

OS MARPAT 134:214934

AB The invention relates to the neg.-working lithog. printing plate or cylinder in which the hydrophilic imaging layer is made up of heat-sensitive hydrophilic ionomer and IR-sensitive dye with several quaternary ammonium groups. Heat is generated by IR laser irradiation. The heat-sensitive polymer is considered "switchable" in response to heat, and provides the lithog. image without wet processing. The IR dyes and the heat-sensitive hydrophilic ionomers were synthesized.

ST thermal imaging compn direct write lithog printing plate; cationic IR dye heat sensitive hydrophilic ionomer printing plate

IT Imaging

(IR; thermal imaging compn. as well as direct write lithog. printing plate contg. cationic IR dye, and method of imaging and printing)

IT Ionomers

Polyethers, preparation

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(prepn. of heat-sensitive hydrophilic ionomer for direct write lithog. printing plate)

IT Lithographic plates

- (thermal imaging compn. as well as direct write lithog.  
printing plate contg. cationic IR dye, and method of  
imaging and printing)
- IT 329039-81-8P 329039-82-9P 329039-85-2P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered material  
use); PREP (Preparation); USES (Uses)  
(cationic IR-sensitive dye in direct write lithog.  
printing plate)
- IT 312963-46-5P  
RL: SPN (Synthetic preparation); TEM (Technical or engineered  
material use); PREP (Preparation); USES (Uses)  
(heat-sensitive hydrophilic ionomer in direct write lithog.  
printing plate)
- IT 1493-13-6, Trifluoromethanesulfonic acid 1643-19-2,  
Tetrabutylammoniumbromide 3779-42-8 41532-84-7, 1,1,2-Trimethyl-1H-  
benz[e]indole 63857-00-1  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of cationic IR-sensitive dye for direct write lithog.  
printing plate)
- IT 329039-79-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT  
(Reactant or reagent)  
(prepn. of cationic IR-sensitive dye for direct write lithog.  
printing plate)
- IT 66-27-3, Methylmethanesulfonate 77-78-1, Dimethylsulfate 594-09-2,  
Trimethylphosphine 1072-63-5, 1-Vinylimidazole 5188-07-8, Sodium  
methanethiolate 7647-15-6, Sodium bromide, reactions 14216-23-0,  
2-(Methylthio)ethylmethacrylate 57458-41-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of heat-sensitive hydrophilic ionomer for direct write  
lithog. printing plate)
- IT 7268-68-0P 25067-32-7P, Methyl methacrylate-2-vinylpyridine  
copolymer 26100-41-4P, Methyl methacrylate-4-vinylpyridine  
copolymer 264255-37-0P 304023-71-0P 304023-76-5P  
312965-31-4P 312966-33-9P 312966-34-0P 312966-37-3P  
312966-38-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP  
(Preparation); RACT (Reactant or reagent)  
(prepn. of heat-sensitive hydrophilic ionomer for direct write  
lithog. printing plate)
- IT 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene oxide), reaction products  
with N-bromosuccinimide and dimethylsulfide 24969-06-0DP,  
Epichlorohydrin homopolymer, reaction products with sodium thiosulfate  
25067-32-7DP, reaction products with Me tolylsulfonate, ion exchange from  
tolylsulfonate to formate 25134-01-4DP, Poly(2,6-dimethyl-1,4-phenylene  
oxide), reaction products with N-bromosuccinimide and dimethylsulfide  
26100-41-4DP, reaction products with Me tolylsulfonate or Bu bromide, ion  
exchange from tolylsulfonate or bromide to formate 51024-16-9DP,  
Vinylbenzyl chloride-styrene copolymer, reaction products with sodium  
thiosulfate 60098-22-8DP, Vinylbenzyl chloride-methyl methacrylate  
copolymer, reaction products with sodium thiosulfate 61710-61-0DP,  
Epichlorohydrin homopolymer, SRU, reaction products with sodium  
thiosulfate 115708-89-9P, Poly(p-xylidene-tetrahydrothiophenium  
chloride) 264255-38-1P, 1-Vinyl-3-methylimidazolium  
methanesulfonate-N-(3-aminopropyl)methacrylamide hydrochloride copolymer  
304023-71-0DP, ion exchange from chloride to acetate or fluoride  
304023-76-5DP, ion exchange from Me sulfate to chloride  
312966-33-9DP, ion exchange from bromide to acetate  
312966-36-2DP, ion exchange from Me sulfate to chloride  
312966-36-2P

RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(prepn. of heat-sensitive hydrophilic ionomer for direct write lithog. printing plate)

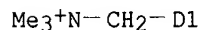
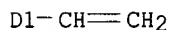
IT 25212-74-2P, Poly(thio-1,4-phenylene)  
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(reaction products with methanesulfonic acid and methyltriflate, ion exchange from triflate to chloride; prepn. of heat-sensitive hydrophilic ionomer for direct write lithog. printing plate)

IT 312963-46-5P  
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(heat-sensitive hydrophilic ionomer in direct write lithog. printing plate)

RN 312963-46-5 HCAPLUS  
CN Benzenemethanaminium, 3(or 4)-ethenyl-N,N,N-trimethyl-, chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

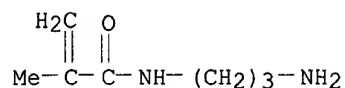
CM 1

CRN 74311-76-5  
CMF C12 H18 N . Cl  
CCI IDS



CM 2

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

IT 304023-71-0P 304023-76-5P 312966-33-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP

(Preparation); RACT (Reactant or reagent)

(prepn. of heat-sensitive hydrophilic ionomer for direct write lithog. printing plate)

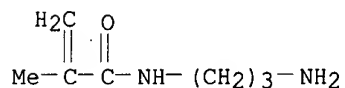
RN 304023-71-0 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H

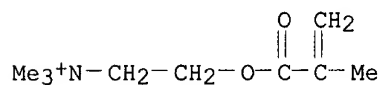


● HCl

CM 2

CRN 5039-78-1

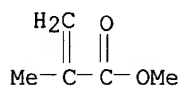
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 80-62-6

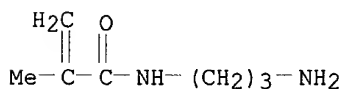
CMF C5 H8 O2



RN 304023-76-5 HCAPLUS  
 CN Sulfonium, dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, methyl sulfate, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5  
 CMF C7 H14 N2 O . Cl H



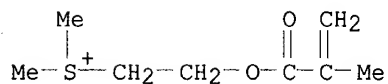
● HCl

CM 2

CRN 7268-68-0  
 CMF C8 H15 O2 S . C H3 O4 S

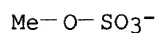
CM 3

CRN 44992-92-9  
 CMF C8 H15 O2 S



CM 4

CRN 21228-90-0  
 CMF C H3 O4 S

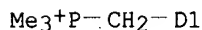
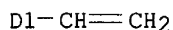


RN 312966-33-9 HCAPLUS  
 CN Phosphonium, [[3(or 4)-ethenylphenyl]methyl]trimethyl-, bromide, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

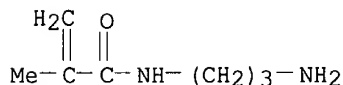


CRN 312965-31-4  
 CMF C12 H18 P . Br  
 CCI IDS

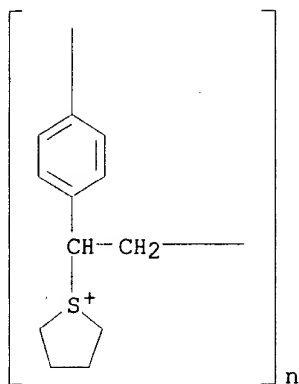


CM 2

CRN 72607-53-5  
 CMF C7 H14 N2 O . Cl H



IT 115708-89-9P, Poly(p-xylylene-tetrahydrothiophenium chloride)  
 264255-38-1P, 1-Vinyl-3-methylimidazolium methanesulfonate-N-(3-aminopropyl)methacrylamide hydrochloride copolymer 304023-71-ODP  
 , ion exchange from chloride to acetate or fluoride 304023-76-5DP  
 , ion exchange from Me sulfate to chloride 312966-33-9DP, ion exchange from bromide to acetate 312966-36-2DP, ion exchange from Me sulfate to chloride 312966-36-2P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. of heat-sensitive hydrophilic ionomer for direct write lithog. printing plate)  
 RN 115708-89-9 HCAPLUS  
 CN Poly[1,4-phenylene[1-(tetrahydrothiophenio)-1,2-ethanediyl] chloride] (9CI) (CA INDEX NAME)



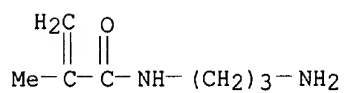
● Cl<sup>-</sup>

RN 264255-38-1 HCAPLUS  
 CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with  
 N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
 INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

CM 2

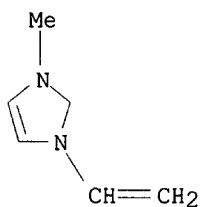
CRN 264255-37-0

CMF C6 H9 N2 . C H3 O3 S

CM 3

CRN 45534-45-0

CMF C6 H9 N2

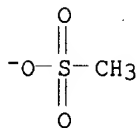


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 16053-58-0

CMF C H3 O3 S



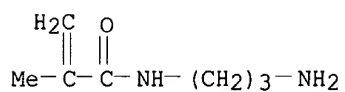
RN 304023-71-0 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-, chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . C1 H

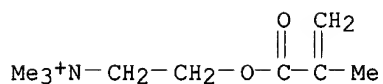


● HCl

CM 2

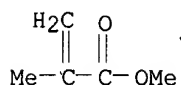
CRN 5039-78-1

CMF C9 H18 N O2 . C1

● Cl<sup>-</sup>

CM 3

CRN 80-62-6  
CMF C5 H8 O2

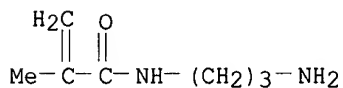


RN 304023-76-5 HCAPLUS

CN Sulfonium, dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, methyl sulfate, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



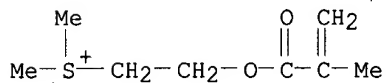
● HCl

CM 2

CRN 7268-68-0  
CMF C8 H15 O2 S . C H3 O4 S

CM 3

CRN 44992-92-9  
CMF C8 H15 O2 S



CM 4

CRN 21228-90-0

CMF C H3 O4 S

 $\text{Me}-\text{O}-\text{SO}_3^-$ 

RN 312966-33-9 HCAPLUS

CN Phosphonium, [[3(or 4)-ethenylphenyl]methyl]trimethyl-, bromide, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 312965-31-4

CMF C12 H18 P . Br

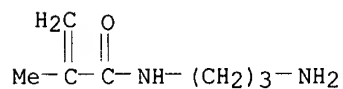
CCI IDS

 $\text{D1}-\text{CH}=\text{CH}_2$  $\text{Me}_3^+\text{P}-\text{CH}_2-\text{D1}$ ●  $\text{Br}^-$ 

CM 2

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



HCl

RN 312966-36-2 HCAPLUS

CN Sulfonium, [[2(or 4)-ethenylphenyl]methyl]-dimethyl-, methyl sulfate,

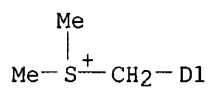
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 312966-35-1

CMF C11 H15 S

CCI IDS

D1-CH=CH<sub>2</sub>

CM 2

CRN 21228-90-0

CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

RN 312966-36-2 HCAPLUS

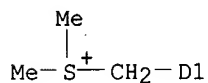
CN Sulfonium, [[2(or 4)-ethenylphenyl]methyl]-dimethyl-, methyl sulfate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 312966-35-1

CMF C11 H15 S

CCI IDS

D1-CH=CH<sub>2</sub>

CM 2

CRN 21228-90-0

CMF C H3 04 S

Me-O-SO<sub>3</sub><sup>-</sup>

L85 ANSWER 11 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2001:129894 HCAPLUS

DN 134:185985

TI Processless direct write **printing plate** having heat sensitive positively-charged polymers and methods of imaging and printing  
IN Leon, Jeffrey W.; Underwood, Gary M.; Fleming, James C.; Deboer, Charles D.

PA Kodak Polychrome Graphics LLC, USA

SO U.S., 12 pp., Cont.-in-part of U. S. Ser. 163,020, abandoned.

CODEN: USXXAM

DT Patent

LA English

IC ICM G03F007-004

NCL 430270100

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35, 38

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----		-----	-----	-----
PI	US 6190831	B1	20010220	US 1999-310038	19990511
	JP 2000112123	A2	20000421	JP 1999-276928	19990929
PRAI	US 1998-163020	B2	19980929		
	US 1999-310038	A	19990511		

AB An imaging member, such as a neg.-working **printing plate**, can be prepd. using a hydrophilic imaging layer comprised of a heat-sensitive hydrophilic polymer having a pos. charged moiety, and optionally a photothermal conversion material. The heat-sensitive polymer has recurring units contg. an N-alkylated arom. heterocyclic group or an organoonium group that reacts to provide increased oleophilicity in areas exposed to energy that provides or generates heat. For example, heat can be supplied by laser irradiation in the IR region of the electromagnetic spectrum. Thus, the heat-sensitive polymer is considered "switchable" in response to heat, and provides an imaging means without wet processing.

ST **lithog printing plate** heat sensitive polymer  
prepn method; thermally switchable polymer digital imaging direct write **printing plate**

IT Polyoxyphenylenes  
Polythiophenylenes

RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)

IT Carbon black, uses

RL: TEM (Technical or engineered material use); USES (Uses)

(prepn. of **printing plates** for imaging without wet processing using photothermal conversion material as)

IT **Lithographic plates**

(processless direct write **printing plate** having

- heat sensitive pos.-charged polymers and methods of imaging and printing)
- IT Polyesters, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(support; prepn. of **printing plates** for imaging without wet processing using polyester support)
- IT 115970-62-2 163120-91-0 297173-98-9  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR dye; prepn. of **printing plates** for imaging without wet processing using IR dye as photothermal conversion material)
- IT 75-75-2DP, Methanesulfonic acid, reaction products with poly(phenylene sulfide) 333-27-7DP, Methyl triflate, reaction products with poly(phenylene sulfide) 25212-74-2DP, Poly(thio-1,4-phenylene), reaction products with methanesulfonic acid and Me triflate 325975-91-5P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); PROC (Process); USES (Uses)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 115708-89-9P, Poly(p-xylylenetetrahydro-thiophenium chloride) 325975-90-4P 325975-92-6P 325975-93-7P  
RL: PEP (Physical, engineering or chemical process); **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 264255-37-0P  
RL: PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 24938-67-8DP, Poly[oxy(2,6-dimethyl-1,4-phenylene)], brominated, reaction products with di-Me sulfide  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 66-27-3, Methyl methanesulfonate 1072-63-5, 1-Vinylimidazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 25067-32-7P, Methyl methacrylate-2-vinylpyridine copolymer 26100-41-4P, Methyl methacrylate-4-vinylpyridine copolymer 264255-38-1P  
RL: RCT (Reactant); **SPN (Synthetic preparation)**; **PREP (Preparation)**; RACT (Reactant or reagent)  
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write **printing plate** for imaging without wet processing)
- IT 7429-90-5, Aluminum, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of **printing plates** for imaging without wet processing using aluminum support)
- IT 325975-94-8  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of **printing plates** for imaging without wet processing using sol-gel)
- IT 222961-29-7, CAB-O-JET 200  
RL: TEM (Technical or engineered material use); USES (Uses)  
(prepn. of **printing plates** for imaging without wet processing using sol-gel and)



IT 25038-59-9, Poly(ethylene terephthalate), uses  
 RL: TEM (Technical or engineered material use); USES (Uses)  
 (support; prepn. of **printing plates** for imaging  
 without wet processing using polyester support)

RE.CNT 20 THERE ARE 20 CITED REFERENCES AVAILABLE FOR THIS RECORD  
 RE

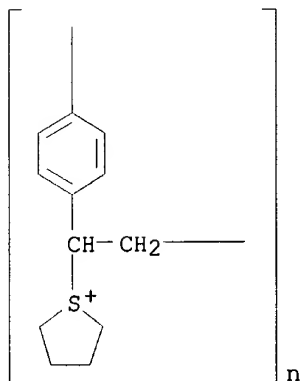
- (1) Ali; US 5460918 1995 HCAPLUS
- (2) Anon; JP 58097042 1983 HCAPLUS
- (3) Anon; WO 9209934 1990 HCAPLUS
- (4) Anon; EP 0652482 A1 1993 HCAPLUS
- (5) Anon; EP 0615162 1994
- (6) Anon; EP 609930 1994 HCAPLUS
- (7) Anon; WO 9739894 1997 HCAPLUS
- (8) Esumi; US 4634659 1987 HCAPLUS
- (9) Etoh; US 4405705 1983 HCAPLUS
- (10) Grant; Hackh's Chemical Dictionary, Fourth Edition P515
- (11) Lee; US 4548893 1985 HCAPLUS
- (12) Ma; US 5512418 1996
- (13) Pacansky; US 4081572 1978 HCAPLUS
- (14) Peterson; US 3964389 1976 HCAPLUS
- (15) Rosen, S; Fundamental Principles of Polymeric Materials, Second Edition 1993, P15
- (16) Schwartz; US 4693958 1987 HCAPLUS
- (17) Takahashi; US 5569573 1996 HCAPLUS
- (18) Totsuka; US 4920036 1990 HCAPLUS
- (19) Totsuka; US 5691103 1997 HCAPLUS
- (20) Uhlig; US 4034183 1977 HCAPLUS

IT 115708-89-9P, Poly(p-xylylenetetrahydro-thiophenium chloride)  
 325975-90-4P

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic  
**preparation**); TEM (Technical or engineered material use); PREP  
**(Preparation)**; PROC (Process); USES (Uses)  
 (prepn. of hydrophilic heat-sensitive imaging polymers for direct write  
**printing plate** for imaging without wet processing)

RN 115708-89-9 HCAPLUS

CN Poly[1,4-phenylene[1-(tetrahydrothiophenyl)-1,2-ethanediyl] chloride]  
 (9CI) (CA INDEX NAME)



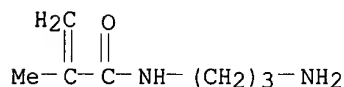
Cl<sup>-</sup>

LEE 09/828075 Page 46

RN 325975-90-4 HCAPLUS  
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, chloride, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

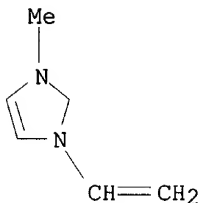
CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

CM 2

CRN 13474-25-4  
CMF C6 H9 N2 . Cl



● Cl<sup>-</sup>

\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

IT 264255-38-1P

RL: RCT (Reactant); **SPN (Synthetic preparation); PREP**  
**(Preparation);** RACT (Reactant or reagent)

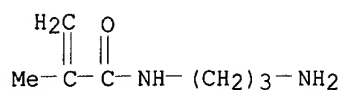
(prepn. of hydrophilic heat-sensitive imaging polymers for direct write  
**printing plate** for imaging without wet processing)

RN 264255-38-1 HCAPLUS

CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

CM 2

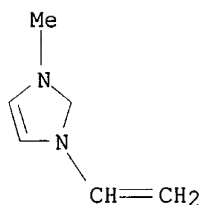
CRN 264255-37-0

CMF C6 H9 N2 . C H3 O3 S

CM 3

CRN 45534-45-0

CMF C6 H9 N2

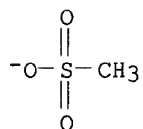


\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 16053-58-0

CMF C H3 O3 S



L85 ANSWER 12 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:875699 HCAPLUS

DN 134:49238

TI Thermal imaging composition and member containing sulfonated IR dye and methods of imaging and printing

IN Fleming, James C.; Leon, Jeffrey W.; Stegman, David A.; Williams, Kevin W.

PA Eastman Kodak Company, USA

SO U.S., 22 pp.

CODEN: USXXAM

DT Patent

LA English

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

IC ICM G03C001-73  
ICS G03C001-76; G03C001-77  
NCL 430270100  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6159657	A	20001212	US 1999-387021	19990831
	DE 10042294	A1	20010412	DE 2000-10042294	20000829
	JP 2001130159	A2	20010515	JP 2000-262836	20000831
PRAI	US 1999-387021	A	19990831		

AB An imaging member, such as a neg.-working **printing plate** or on-press cylinder, can be prep'd. with a hydrophilic imaging layer comprised of a heat-sensitive hydrophilic polymer having ionic moieties and an IR radiation sensitive dye having multiple sulfo groups. The heat-sensitive polymer and IR dye can be formulated in water or water-miscible solvents to provide highly thermal sensitive imaging compns. In the imaging member, the polymer reacts to provide increased hydrophobicity in areas exposed to energy that provides or generates heat. For example, heat can be supplied by laser irradiation in the IR region of the electromagnetic spectrum. The heat-sensitive polymer is considered "switchable" in response to heat, and provides a **lithog.** image without wet processing.

ST **lithog printing plates;** thermal sensitive polymer **cyanine** dye

IT **Cyanine** dyes

**Lithographic** plates

Thermal printing materials

(thermal imaging compn. and member contg. sulfonated IR dye)

IT 75-18-3, Dimethyl sulfide 75-75-2, Methanesulfonic acid 77-78-1, Dimethylsulfate 170-18-9, N,N,N',N'-Tetramethylethylenediamine 333-27-7, Methyl triflate 594-09-2, Trimethyl phosphine 5188-07-8, Sodium methanethiolate 7647-15-6, Sodium bromide, reactions 14216-23-0, 2-(Methylthio)ethylmethacrylate 52747-02-1 57458-41-0  
RL: RCT (Reactant); RACT (Reactant or reagent)

(thermal imaging compn. and member contg. sulfonated IR dye)

IT 7268-68-OP 29636-96-2P 99044-67-4P 119261-36-8P **304023-76-5P**  
312539-11-OP 312963-52-3P 312965-31-4P **312966-33-9P**  
312966-34-OP **312966-36-2P** 312966-37-3P 312966-38-4P  
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP (Preparation);** RACT (Reactant or reagent)

(thermal imaging compn. and member contg. sulfonated IR dye)

IT 66-27-3P, Methyl methanesulfonate 1072-63-5P, 1-Vinylimidazole 24938-67-8DP, Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction products with di-Me sulfide 25067-32-7P 25134-01-4DP, Poly(2,6-dimethyl-1,4-phenylene oxide), brominated, reaction products with di-Me sulfide 25212-74-2DP, Poly(phenylene sulfide), reaction products with methanesulfonic acid and Me triflate, chloride-exchanged 26100-41-4P, Methyl methacrylate-4-vinylpyridine copolymer **110866-77-8P** 264255-37-OP **264255-38-1DP**, chloride-exchanged 264255-39-2DP, ion exchange with formic acid 264255-78-9DP, ion exchange with formic acid 264255-79-ODP, ion exchange with formic acid **304023-71-ODP**, ion exchange from chloride to acetate or fluoride **304023-71-OP 304023-76-5DP**, ion exchange from methylsulfate to chloride 312539-12-1P **312966-33-9DP**, ion exchange from bromide to acetate **312966-40-8DP**, ion exchange from Me sulfate to chloride  
RL: **SPN (Synthetic preparation); PREP (Preparation)**

(thermal imaging compn. and member contg. sulfonated IR dye)

IT 100356-86-3P 113995-59-8P 119261-38-0P 262283-81-8P  
262283-83-0P 312963-46-5P 312963-48-7P 312963-49-8P  
312963-50-1P 312963-51-2P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)

(thermal imaging compn. and member contg. sulfonated IR dye)

RE.CNT 19 THERE ARE 19 CITED REFERENCES AVAILABLE FOR THIS RECORD  
RE

- (1) Anon; EP 0251282 1988 HCAPLUS
- (2) Anon; WO 9209934 1992 HCAPLUS
- (3) Anon; EP 0652483 A1 1995 HCAPLUS
- (4) Anon; Research Disclosure, Item 19201 1980
- (5) Esumi; US 4634659 1987 HCAPLUS
- (6) Etoh; US 4405705 1983 HCAPLUS
- (7) Gelbart; US 5713287 1998
- (8) Laganis; US 4882265 1989 HCAPLUS
- (9) Lee; US 4548893 1985 HCAPLUS
- (10) Leenders; US 5378580 1995 HCAPLUS
- (11) Lewis; US 5339737 1994
- (12) Lewis; US 5353705 1994
- (13) Lewis; US 5385092 1995
- (14) Ma; US 5512418 1996
- (15) Nowak; US 35512 1997
- (16) Pacansky; US 4081572 1978 HCAPLUS
- (17) Schwartz; US 4693958 1987 HCAPLUS
- (18) Uhlig; US 4034183 1977 HCAPLUS
- (19) West; US 5107068 1992 HCAPLUS

IT 304023-76-5P 312966-33-9P 312966-36-2P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(thermal imaging compn. and member contg. sulfonated IR dye)

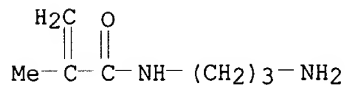
RN 304023-76-5 HCAPLUS

CN Sulfonium, dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, methyl sulfate, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

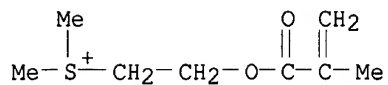
CM 2

CRN 7268-68-0

CMF C8 H15 O2 S . C H3 O4 S

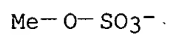
CM 3

CRN 44992-92-9  
CMF C8 H15 O2 S



CM 4

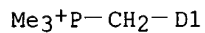
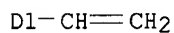
CRN 21228-90-0  
CMF C H3 O4 S



RN 312966-33-9 HCAPLUS  
CN Phosphonium, [[3(or 4)-ethenylphenyl]methyl]trimethyl-, bromide, polymer  
with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

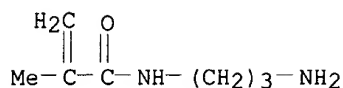
CM 1

CRN 312965-31-4  
CMF C12 H18 P . Br  
CCI IDS



CM 2

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

RN 312966-36-2 HCAPLUS

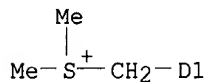
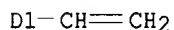
CN Sulfonium, [[2(or 4)-ethenylphenyl]methyl]-dimethyl-, methyl sulfate, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 312966-35-1

CMF C11 H15 S

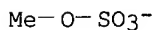
CCI IDS



CM 2

CRN 21228-90-0

CMF C H3 O4 S



IT 110866-77-8P 264255-38-1DP, chloride-exchanged  
 304023-71-0DP, ion exchange from chloride to acetate or fluoride  
 304023-71-0P 304023-76-5DP, ion exchange from  
 methylsulfate to chloride 312966-33-9DP, ion exchange from  
 bromide to acetate 312966-40-8DP, ion exchange from Me sulfate  
 to chloride

RL: SPN (Synthetic preparation); PREP (Preparation)

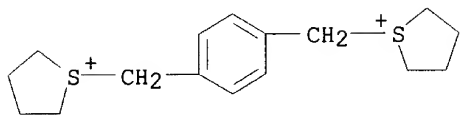
(thermal imaging compn. and member contg. sulfonated IR dye)

RN 110866-77-8 HCAPLUS

CN Thiophenium, 1,1'-[1,4-phenylenebis(methylene)]bis[tetrahydro-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 52547-07-6  
CMF C16 H24 S2 . 2 Cl

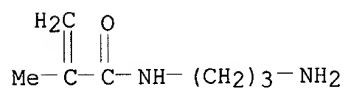


● 2 Cl<sup>-</sup>

RN 264255-38-1 HCAPLUS  
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



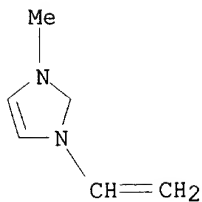
● HCl

CM 2

CRN 264255-37-0  
CMF C6 H9 N2 . C H3 O3 S

CM 3

CRN 45534-45-0  
CMF C6 H9 N2



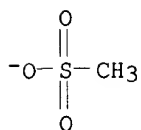
\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*



CM 4

CRN 16053-58-0

CMF C H3 O3 S



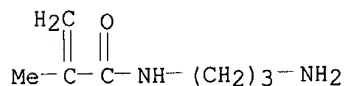
RN 304023-71-0 HCAPLUS

CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-,  
chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H

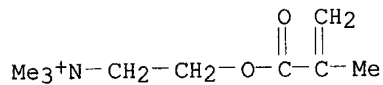


● HCl

CM 2

CRN 5039-78-1

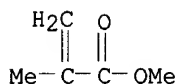
CMF C9 H18 N O2 . Cl

● Cl<sup>-</sup>

CM 3

CRN 80-62-6

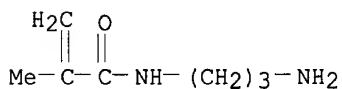
CMF C5 H8 O2



RN 304023-71-0 HCAPLUS  
CN Ethanaminium, N,N,N-trimethyl-2-[(2-methyl-1-oxo-2-propenyl)oxy]-,  
chloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride and methyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

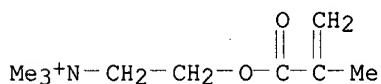
CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



● HCl

CM 2

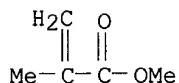
CRN 5039-78-1  
CMF C9 H18 N O2 . Cl



● Cl<sup>-</sup>

CM 3

CRN 80-62-6  
CMF C5 H8 O2

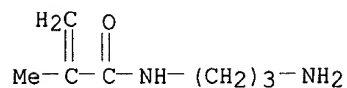


RN 304023-76-5 HCAPLUS  
CN Sulfonium, dimethyl[2-[(2-methyl-1-oxo-2-propenyl)oxy]ethyl]-, methyl  
sulfate, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide  
monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

CM 2

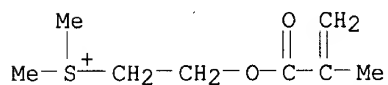
CRN 7268-68-0

CMF C8 H15 O2 S . C H3 O4 S

CM 3

CRN 44992-92-9

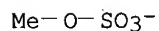
CMF C8 H15 O2 S



CM 4

CRN 21228-90-0

CMF C H3 O4 S



RN 312966-33-9 HCAPLUS

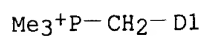
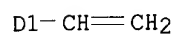
CN Phosphonium, [[3(or 4)-ethenylphenyl]methyl]trimethyl-, bromide, polymer  
with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

CRN 312965-31-4

CMF C12 H18 P . Br

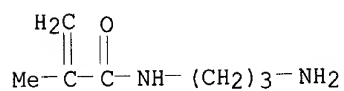
CCI IDS



CM 2

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



RN 312966-40-8 HCAPLUS

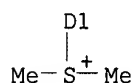
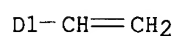
CN Sulfonium, [2(or 4)-ethenylphenyl]dimethyl-, methyl sulfate, homopolymer  
(9CI) (CA INDEX NAME)

CM 1

CRN 312966-39-5

CMF C10 H13 S

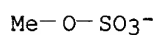
CCI IDS



CM 2

CRN 21228-90-0

CMF C H3 O4 S



IT 100356-86-3P 312963-46-5P 312963-48-7P

RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(thermal imaging compn. and member contg. sulfonated IR dye)

RN 100356-86-3 HCAPLUS

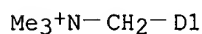
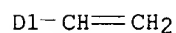
CN Benzenemethanaminium, ar-ethenyl-N,N,N-trimethyl-, chloride, polymer with  
2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 26616-35-3

CMF C12 H18 N . Cl

CCI IDS

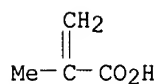


LEE 09/828075

Page 58

CM 2

CRN 79-41-4  
CMF C4 H6 O2

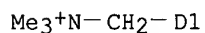
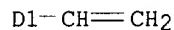


RN 312963-46-5 HCAPLUS

CN Benzenemethanaminium, 3(or 4)-ethenyl-N,N,N-trimethyl-, chloride, polymer  
with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

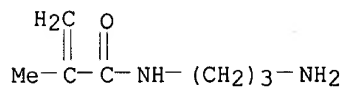
CM 1

CRN 74311-76-5  
CMF C12 H18 N . Cl  
CCI IDS



CM 2

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



RN 312963-48-7 HCAPLUS

CN 1,2-Ethanediaminium, N-[(4-ethenylphenyl)methyl]-N,N,N',N',N'-pentamethyl-

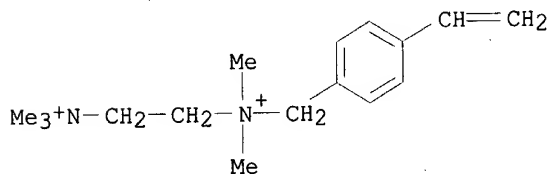
KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

, dichloride, polymer with N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA INDEX NAME)

CM 1

CRN 312963-47-6

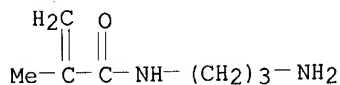
CMF C16 H28 N2 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 72607-53-5

CMF C7 H14 N2 O . Cl H



● HCl

L85 ANSWER 13 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:680396 HCAPLUS

DN 133:274344

TI Thermally reactive near infrared absorption polymer coatings, method of preparing and methods of use

IN Nguyen, My T.

PA American Dye Source, Inc., Can.

SO U.S., 16 pp.

CODEN: USXXAM

DT Patent

LA English

IC ICM C08G073-00

NCL 528422000

CC 74-13 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 6124425	A	20000926	US 1999-275032	19990318
	WO 2000056791	A1	20000928	WO 2000-CA296	20000317

W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, DZ, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM

RW: GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW, AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG

EP 1161469 A1 20011212 EP 2000-910470 20000317

R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC, PT, IE, SI, LT, LV, FI, RO

US 6177182 B1 20010123 US 2000-561817 20000501

PRAI US 1999-275032 A 19990318

WO 2000-CA296 W 20000317

AB Provided here are novel polymeric coating materials for direct digital imaging by laser. More specifically the novel coating materials are thermally reactive near IR absorption polymers designed for use with near IR laser imaging devices. This invention further extends to the prepn. and methods of use of the novel materials. The invention is particularly useful in the prepn. of **lithog. printing plates** for computer-to-plate and digital-offset-press technologies. The invention extends to photoresist applications, to rapid prototyping of printed circuit boards and to chem. sensor development.

ST thermally reactive IR absorption polymer coating

IT IR lasers  
(near-IR; prepn. of chem. sensor for measuring electrode cond. in direct digital laser imaging)

IT Coating materials  
Imaging  
Lithographic plates  
Photoresists  
Printed circuit boards  
Sensors  
(prepn. of chem. sensor for measuring electrode cond. in direct digital laser imaging)

IT Polyanilines  
Polyesters, uses  
RL: NUU (Other use, unclassified); USES (Uses)  
(prepn. of chem. sensor for measuring electrode cond. in direct digital laser imaging)

IT 68584-99-6, P3000  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(aq. developer; pos. thermal **printing plate** for direct digital laser imaging developed using)

IT 872-50-4, 1-Methyl-2-pyrrolidinone, uses 25233-30-1, Polyaniline  
RL: NUU (Other use, unclassified); USES (Uses)  
(prepn. of chem. sensor for measuring electrode cond. in direct digital laser imaging)

IT 26355-01-1, Methyl methacrylate-2-hydroxyethyl methacrylate copolymer  
28015-39-6, Methyl methacrylate-N-(methoxymethyl)methacrylamide copolymer  
139301-16-9  
RL: NUU (Other use, unclassified); RCT (Reactant); RACT (Reactant or reagent); USES (Uses)  
(prepn. of neg. thermal **printing plate** for direct digital laser imaging using)

IT 9016-83-5DP, SD 140A, ethers with **cyanine** dyes 110123-09-6DP, ethers with **cyanine** dyes 134127-48-3DP, ethers with hydroxy-contg. polymers 247248-90-4DP, ethers with hydroxy-contg.



polymers 297174-00-6P 297174-03-9P  
297174-06-2P 297174-07-3P 297174-09-5P  
297174-11-9P 297174-13-1P 297174-15-3P  
297174-17-5P 297174-18-6P 297174-20-0P

297752-34-2DP, ethers with cyanine dyes

RL: IMF (Industrial manufacture); NUU (Other use, unclassified);

PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(synthesis of near-IR absorption polymer thermal coatings for direct digital imaging by laser)

RE.CNT 39 THERE ARE 39 CITED REFERENCES AVAILABLE FOR THIS RECORD

RE

- (1) Anon; GB 1489308 1977 HCAPLUS
- (2) Anon; WO 0652483 A1 1994
- (3) Anon; WO 9620429 1996 HCAPLUS
- (4) Anon; EP 0770495 A1 1997 HCAPLUS
- (5) Anon; EP 0770497 A1 1997 HCAPLUS
- (6) Anon; EP 0773113 A1 1997 HCAPLUS
- (7) Anon; WO 9739894 1997 HCAPLUS
- (8) Anon; DE 0867278 A1 1998
- (9) Anon; GB 2273366 1998
- (10) Anon; EP 0514145 A1 2000 HCAPLUS
- (11) Anon; EP 0770494 A2 2000 HCAPLUS
- (12) Anon; EP 0770496 A1 2000 HCAPLUS
- (13) Anon; EP 0773112 A1 2000 HCAPLUS
- (14) Anon; EP 0774364 A1 2000 HCAPLUS
- (15) Anon; EP 0800928 A1 2000 HCAPLUS
- (16) Burns; US 5824768 1998 HCAPLUS
- (17) Caddell; US 4054094 1977 HCAPLUS
- (18) Eames; US 3962513 1976 HCAPLUS
- (19) Elmasry; US 4666819 1987 HCAPLUS
- (20) Elmasry; US 4680375 1987 HCAPLUS
- (21) Fan; US 5262275 1993 HCAPLUS
- (22) Gamson; US 4555475 1985
- (23) Gravesteijn; US 4508811 1985 HCAPLUS
- (24) Holmes; US 5362812 1994 HCAPLUS
- (25) Holmes; US 5741620 1998 HCAPLUS
- (26) Kashio; US 5665524 1997 HCAPLUS
- (27) Leenders; US 5595854 1997 HCAPLUS
- (28) Ma; US 5292556 1994
- (29) Mitra; US 4477635 1984 HCAPLUS
- (30) Nussstein; US 5360899 1994 HCAPLUS
- (31) Ohno; US 5547819 1996 HCAPLUS
- (32) Oransky; US 4245003 1981 HCAPLUS
- (33) Pacansky; US 4081572 1978 HCAPLUS
- (34) Persley; US 08922714 1997
- (35) Peterson; US 3964389 1976 HCAPLUS
- (36) Shaw; US 4046946 1977 HCAPLUS
- (37) Takahashi; US 5569573 1996 HCAPLUS
- (38) Vogel; US 5085972 1992 HCAPLUS
- (39) Zahr; US 4501876 1985 HCAPLUS

IT 297174-00-6P 297174-03-9P 297174-06-2P  
297174-07-3P 297174-09-5P 297174-11-9P  
297174-13-1P 297174-15-3P 297174-17-5P  
297174-18-6P 297174-20-0P

RL: IMF (Industrial manufacture); NUU (Other use, unclassified);

PNU (Preparation, unclassified); PREP (Preparation); USES (Uses)

(synthesis of near-IR absorption polymer thermal coatings for direct digital imaging by laser)

RN 297174-00-6 HCAPLUS

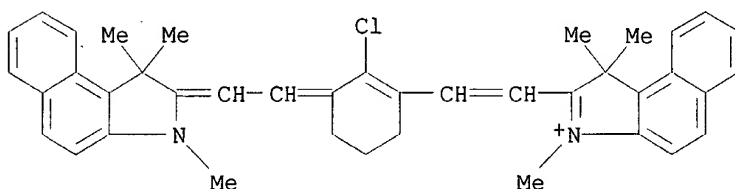
CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,1,3-trimethyl-2H-

benz[e]indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297173-98-9

CMF C40 H40 Cl N2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

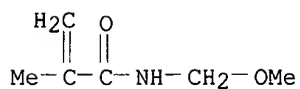
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

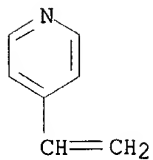
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



RN 297174-03-9 HCAPLUS

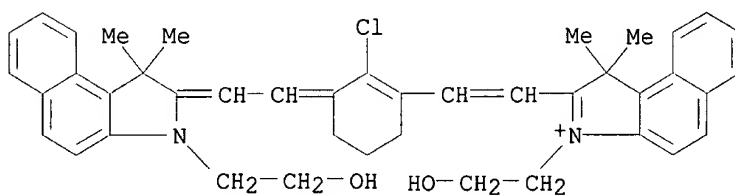
CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[[1,3-dihydro-3-(2-hydroxyethyl)-1,1-dimethyl-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-

3-(2-hydroxyethyl)-1,1-dimethyl-, chloride, compd. with 4-ethenylpyridine  
polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX  
NAME)

CM 1

CRN 297174-02-8

CMF C42 H44 Cl N2 O2 . Cl



● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

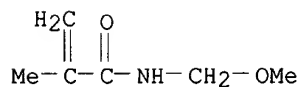
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

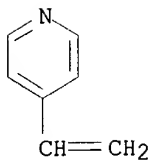
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



RN 297174-06-2 HCAPLUS

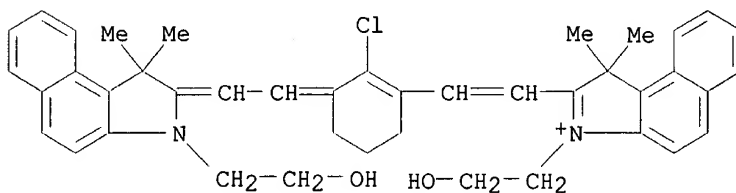
CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[[1,3-dihydro-3-(2-hydroxyethyl)-1,1-dimethyl-2H-benz[e]indol-2-ylidene]ethylidene]-1-cyclohexen-1-yl]ethenyl]-

3-(2-hydroxyethyl)-1,1-dimethyl-, chloride, compd. with butyl  
2-methyl-2-propenoate polymer with 4-ethenylpyridine and  
N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-02-8

CMF C42 H44 Cl N2 O2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297174-05-1

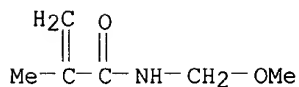
CMF (C8 H14 O2 . C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

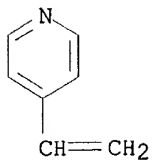
CMF C6 H11 N O2



CM 4

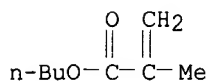
CRN 100-43-6

CMF C7 H7 N



CM 5

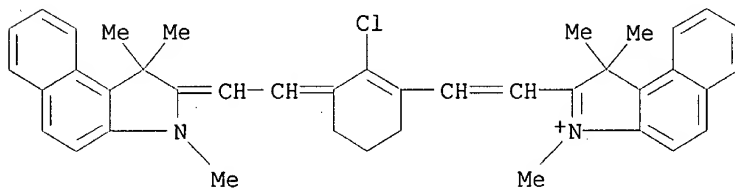
CRN 97-88-1  
CMF C8 H14 O2



RN 297174-07-3 HCAPLUS  
CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride, compd. with 2-chloroethanol and 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

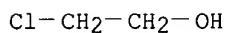
CRN 297173-98-9  
CMF C40 H40 Cl N2 . Cl



● Cl<sup>-</sup>

CM 2

CRN 107-07-3  
CMF C2 H5 Cl O

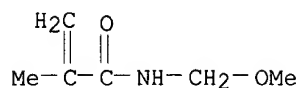


CM 3

CRN 297173-99-0  
CMF (C7 H7 N . C6 H11 N O2) x  
CCI PMS

CM 4

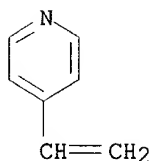
CRN 3644-12-0  
CMF C6 H11 N O2



CM 5

CRN 100-43-6

CMF C7 H7 N



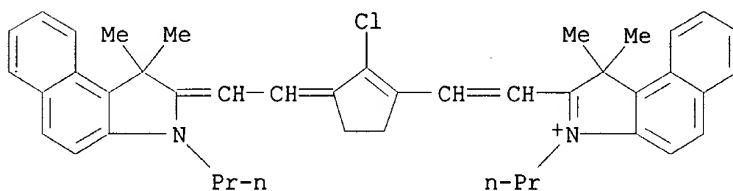
RN 297174-09-5 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,1-dimethyl-3-propyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-propyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-08-4

CMF C43 H46 Cl N2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

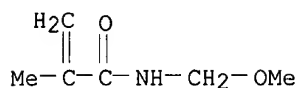
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

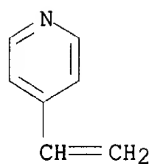
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



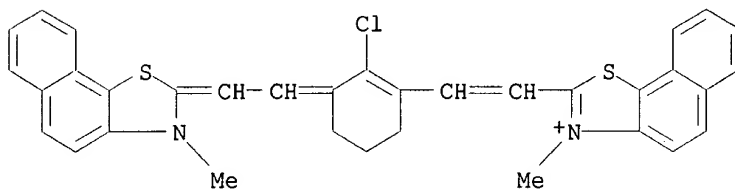
RN 297174-11-9 HCAPLUS

CN Naphtho[2,1-d]thiazolium, 2-[2-[2-chloro-3-[(3-methylnaphtho[2,1-d]thiazol-2(3H)-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3-methyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-10-8

CMF C34 H28 Cl N2 S2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

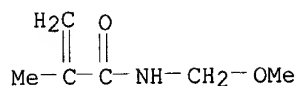
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

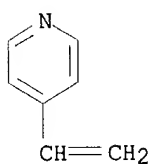
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



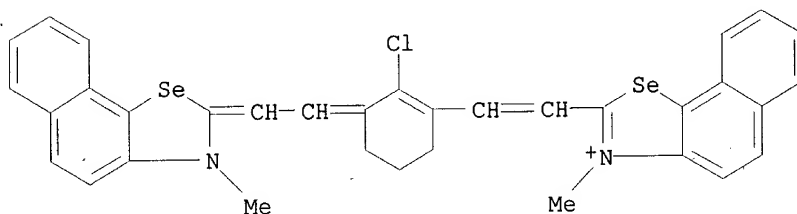
RN 297174-13-1 HCAPLUS

CN Naphtho[2,1-d]selenazolium, 2-[2-[2-chloro-3-[(3-methylnaphtho[2,1-d]selenazol-2(3H)-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3-methyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-12-0

CMF C34 H28 Cl N2 Se2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

CMF (C7 H7 N . C6 H11 N O2)x

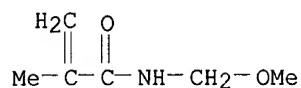
CCI PMS

CM 3

CRN 3644-12-0

CMF C6 H11 N O2

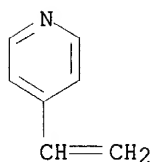




CM 4

CRN 100-43-6

CMF C7 H7 N



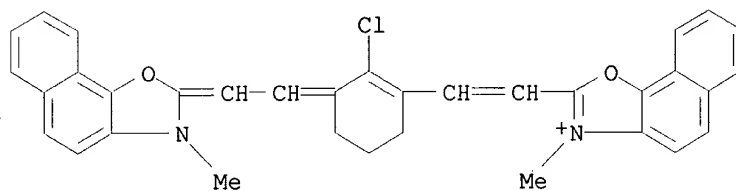
RN 297174-15-3 HCAPLUS

CN Naphth[2,1-d]oxazolium, 2-[2-[2-chloro-3-[(3-methylnaphth[2,1-d]oxazol-2(3H)-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-3-methyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-14-2

CMF C34 H28 Cl N2 O2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

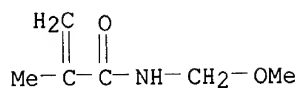
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

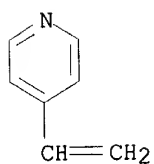
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



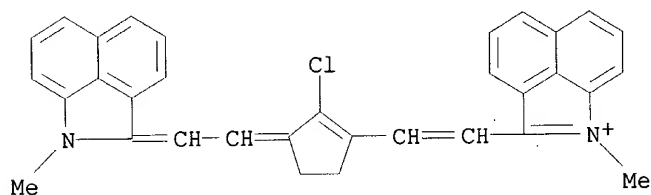
RN 297174-17-5 HCAPLUS

CN Benz[cd]indolium, 2-[2-[2-chloro-3-[(1-methylbenz[cd]indol-2(1H)-ylidene)ethylidene]-1-cyclopenten-1-yl]ethenyl]-1-methyl-, chloride, compd. with 4-ethenylpyridine polymer with N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-16-4

CMF C33 H26 Cl N2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 297173-99-0

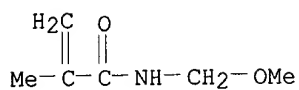
CMF (C7 H7 N . C6 H11 N O2)x

CCI PMS

CM 3

CRN 3644-12-0

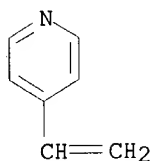
CMF C6 H11 N O2



CM 4

CRN 100-43-6

CMF C7 H7 N



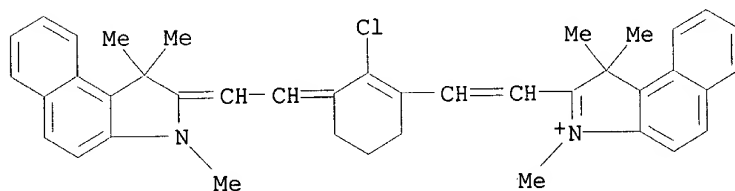
RN 297174-18-6 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,1,3-trimethyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclohexen-1-yl]ethenyl]-1,1,3-trimethyl-, chloride, compd. with 2-chloroethanol and 4-ethenylpyridine polymer with 2-hydroxyethyl 2-methyl-2-propenoate (9CI) (CA INDEX NAME)

CM 1

CRN 297173-98-9

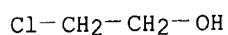
CMF C40 H40 Cl N2 . Cl

● Cl<sup>-</sup>

CM 2

CRN 107-07-3

CMF C2 H5 Cl O



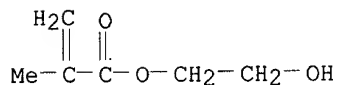
CM 3

CRN 36180-84-4

CMF (C7 H7 N . C6 H10 O3)x  
CCI PMS

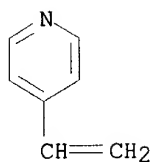
CM 4

CRN 868-77-9  
CMF C6 H10 O3



CM 5

CRN 100-43-6  
CMF C7 H7 N

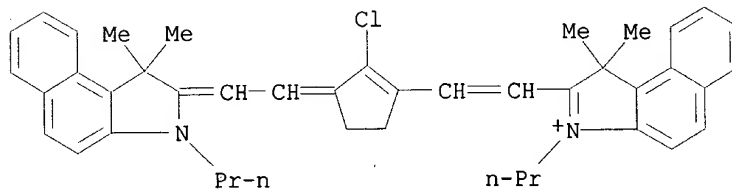


RN 297174-20-0 HCAPLUS

CN 1H-Benz[e]indolium, 2-[2-[2-chloro-3-[(1,3-dihydro-1,1-dimethyl-3-propyl-2H-benz[e]indol-2-ylidene)ethylidene]-1-cyclopenten-1-yl]ethenyl]-1,1-dimethyl-3-propyl-, chloride, compd. with butyl 2-methyl-2-propenoate polymer with 2-(dimethylamino)ethyl 2-methyl-2-propenoate and N-(methoxymethyl)-2-methyl-2-propenamide (9CI) (CA INDEX NAME)

CM 1

CRN 297174-08-4  
CMF C43 H46 Cl N2 . Cl



● Cl<sup>-</sup>

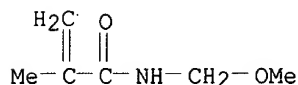
CM 2

CRN 297174-19-7

CMF (C8 H15 N O2 . C8 H14 O2 . C6 H11 N O2)x  
 CCI PMS

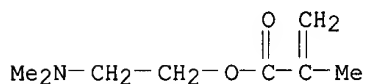
CM 3

CRN 3644-12-0  
 CMF C6 H11 N O2



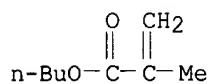
CM 4

CRN 2867-47-2  
 CMF C8 H15 N O2



CM 5

CRN 97-88-1  
 CMF C8 H14 O2



L85 ANSWER 14 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 2000:254687 HCAPLUS

DN 132:300960

TI Heat-sensitive lithographic imaging material and imaging method using it

IN Leon, Jeffrey W.; Underwood, Gary Marshall; Fleming, James C.; De Boer, Charles David

PA Eastman Kodak Co., USA

SO Jpn. Kokai Tokkyo Koho, 14 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-027

ICS C08L033-06; C08L039-04; C08L101-02; G03F007-00; G03F007-029

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	---	-----	-----	-----
PI	JP 2000112123	A2	20000421	JP 1999-276928	19990929

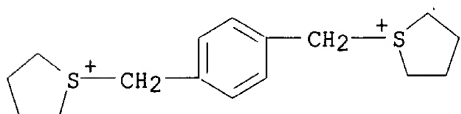
- US 6190831 B1 20010220 US 1999-310038 19990511  
PRAI US 1998-163020 A 19980929  
US 1999-310038 A 19990511
- AB The imaging material has a hydrophilic imaging layer contg. vinyl polymers having pos.-charged N-alkyl-pendent arom. heterocycle repeating units or nonvinyl polymers contg. org. onium repeating units as hydrophilic heat-sensitive polymers. The method comprises imagewise irradiation of an energy to the above imaging material to make the exposed area more lipophilic than unexposed areas. The material gives neg.-working lithog. plates without development.
- ST heat sensitive lithog. plate quaternary ammonium polymer; onium pendent heat sensitive polymer lithog. plate; neg lithog printing plate development free
- IT Heat-sensitive materials  
Lithographic plates  
(heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT Quaternary ammonium compounds, uses  
RL: DEV (Device component use); USES (Uses)  
(polymers; heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT 75-18-3DP, Dimethyl sulfide, compd. with brominated polyoxyphenylenes 24938-67-8DP, 2,6-Xylenol homopolymer, sru, brominated, compd. with di-Me sulfide 25134-01-4DP, 2,6-Xylenol homopolymer, brominated, compd. with di-Me sulfide 25212-74-2DP, Poly(phenylene sulfide), chloride ion exchanged, reaction product with methanesulfonic acid 110866-77-8P 264255-38-1DP, chloride ion exchanged 264255-39-2P, Methyl methacrylate-4-vinylpyridine copolymer-1-bromobutane compd. 264255-78-9P, Methyl methacrylate-4-vinylpyridine copolymer methyl p-toluenesulfonate 264255-79-0P, Methyl methacrylate-2-vinylpyridine copolymer methyl p-toluenesulfonate  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT 264255-37-0P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(prepn. and polymn. of; heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT 1072-63-5, 1-Vinylimidazole  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with Me methanesulfonate; heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT 66-27-3, Methyl methanesulfonate  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(reaction with vinylimidazole; heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)
- IT 110866-77-8P 264255-38-1DP, chloride ion exchanged  
RL: DEV (Device component use); IMF (Industrial manufacture); PREP (Preparation); USES (Uses)  
(heat-sensitive lithog. imaging material contg. N-alkyl-pendent vinyl polymers or onium unit-contg. nonvinyl polymer as heat-sensitive material)

LEE 09/828075 Page 75

RN 110866-77-8 HCAPLUS  
CN Thiophenium, 1,1'-[1,4-phenylenebis(methylene)]bis[tetrahydro-,  
dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 52547-07-6  
CMF C16 H24 S2 . 2 Cl

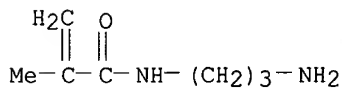


● 2 Cl<sup>-</sup>

RN 264255-38-1 HCAPLUS  
CN 1H-Imidazolium, 1-ethenyl-3-methyl-, methanesulfonate, polymer with  
N-(3-aminopropyl)-2-methyl-2-propenamide monohydrochloride (9CI) (CA  
INDEX NAME)

CM 1

CRN 72607-53-5  
CMF C7 H14 N2 O . Cl H



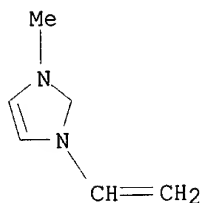
● HCl

CM 2

CRN 264255-37-0  
CMF C6 H9 N2 . C H3 O3 S

CM 3

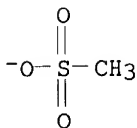
CRN 45534-45-0  
CMF C6 H9 N2



\*\*\* FRAGMENT DIAGRAM IS INCOMPLETE \*\*\*

CM 4

CRN 16053-58-0  
CMF C H3 O3 S



L85 ANSWER 15 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:789817 HCAPLUS

DN 132:28708

TI Photosensitive polymer aqueous emulsion for manufacture of screen  
**printing plate**

IN Tsuchida, Keiko; Morigaki, Toshio

PA Gooch Chemical Industry Co., Ltd., Japan

SO Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-004

ICS G03F007-033; G03F007-12

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 45

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11344801	A2	19991214	JP 1998-170693	19980602
AB	The emulsion contains a 100:(20-4000) (wt. ratio) mixt. of water-sol. and water-insol. polymers and 0.2-10 wt.% (as solids) waxes. A screen <b>printing plate</b> obtained from the emulsion shows improved water resistance and water repellency and gives clear images.				
ST	photosensitive polymer aq emulsion screen <b>printing plate</b> ; wax photosensitive emulsion screen printing water resistance				
IT	Paraffin waxes, uses RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (Dyedit EY, Syetex K 2500; wax-contg. photosensitive polymer aq. emulsions for manuf. of screen <b>printing plates</b> )				
IT	<b>Printing plates</b> (screen; wax-contg. photosensitive polymer aq. emulsions for manuf. of				



screen **printing plates**)

IT Beeswax  
Photoimaging materials  
(wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

IT 9003-20-7, Poly(vinyl acetate)  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(Nikasol H 03; wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

IT 9002-89-5DP, Gohsenol GH 17, reaction products with methyl(formylstyryl) **pyridinium** methosulfate 29989-17-1P 74401-04-ODP, N-Methyl-4-(p-formylstyryl) **pyridinium** methosulfate, reaction products with poly(vinyl alc.)  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

IT 9002-89-5, Gohsenol GH 17 143180-25-0, Poval 224  
RL: DEV (Device component use); TEM (Technical or engineered material use); USES (Uses)  
(wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

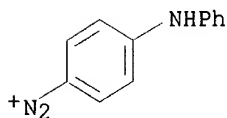
IT 9002-88-4, Polyethylene 9003-07-0, Polypropylene  
RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)  
(waxes; wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

IT 29989-17-1P  
RL: DEV (Device component use); IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(wax-contg. photosensitive polymer aq. emulsions for manuf. of screen **printing plates**)

RN 29989-17-1 HCAPLUS  
CN Benzenediazonium, 4-(phenylamino)-, chloride, polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 101-56-4  
CMF C12 H10 N3 . Cl



● Cl<sup>-</sup>

CM 2

CRN 50-00-0

CMF C H2 O

H<sub>2</sub>C=O

L85 ANSWER 16 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:427006 HCAPLUS

DN 131:122986

TI Presensitized lithographic plate with photosensitive layer  
containing microgel

IN Kojima, Noriyoshi

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 18 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-00

ICS G03F007-004

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11184073	A2	19990709	JP 1997-349419	19971218
AB	The title presensitized lithog. plate comprises an Al support coated with a microgel-contg. photosensitive layer on 1 side and with a backcoat layer on the other side. The lithog. plate shows good scratch resistance when a stack of a large no. of the presensitized lithog. plates is transported or stored.				
ST	presensitized lithog plate microgel photosensitive layer; back coat layer presensitized lithog plate				
IT	Polyvinyl butyrals				
	RL: DEV (Device component use); USES (Uses) (Denka Butyral 3000, backcoat layer; presensitized lithog. plate with photosensitive layer contg. microgel and backcoat layer)				
IT	Polyesters, uses Polyurethanes, uses Silicates, uses				
	RL: DEV (Device component use); USES (Uses) (backcoat layer; presensitized lithog. plate with photosensitive layer contg. microgel and backcoat layer)				
IT	Lithographic plates (presensitized; presensitized lithog. plate with photosensitive layer contg. microgel and backcoat layer)				
IT	78-10-4D, Tetraethylsilicate, hydrolyzed 25068-38-6, Pheno Tohto YP-50 91727-18-3, Desmolac 2100 116094-77-0, Kemit K-1089 117847-82-2, Kemit K-1294				
	RL: DEV (Device component use); USES (Uses) (backcoat layer; presensitized lithog. plate with photosensitive layer contg. microgel and backcoat layer)				
IT	85568-56-5, Megafac F-177				
	RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses) (backcoat layer; presensitized lithog. plate with photosensitive layer contg. microgel and backcoat layer)				
IT	74443-77-9, Divinylbenzene-styrene-benzylidimethyl-p-styrenylmethyllummonium chloride copolymer				

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

(presensitized **lithog.** plate with photosensitive layer contg. microgel and backcoat layer)

IT 3770-97-6DP, o-Naphthoquinonediazide-5-sulfonyl chloride, reaction products with acrylic copolymer **56343-12-5DP**, Styrene-trihexyl-p-styrenylmethyammonium chloride **copolymer**, reaction products with **dye 74443-77-9DP**, reaction products with azidonaphthalene sulfonic acid 93673-76-8DP, reaction products with cationic polymer 104718-47-0DP, reaction products with cationic polymer 231301-22-7DP, reaction products with cationic polymer 231301-23-8P, tert-Butyl p-vinyl benzoate-divinylbenzene-styrene copolymer 233277-83-3DP, 1,4-Butanediol diacrylate-ethyl acrylate-ethyl methacrylate-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer, reaction products with naphthoquinonediazidesulfonyl chloride

RL: DEV (Device component use); MOA (Modifier or additive use); PNU (Preparation, unclassified); **PREP (Preparation)**; USES (Uses)

(presensitized **lithog.** plate with photosensitive layer contg. microgel and backcoat layer)

IT **74443-77-9**, Divinylbenzene-styrene-benzyltrimethylammonium chloride copolymer

RL: DEV (Device component use); MOA (Modifier or additive use); USES (Uses)

(presensitized **lithog.** plate with photosensitive layer contg. microgel and backcoat layer)

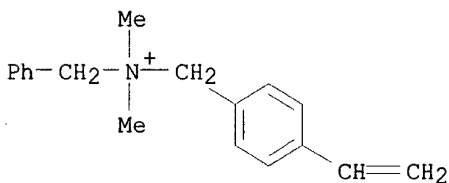
RN 74443-77-9 HCAPLUS

CN Benzenemethanaminium, 4-ethenyl-N,N-dimethyl-N-(phenylmethyl)-, chloride, polymer with diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 66099-76-1

CMF C18 H22 N . Cl



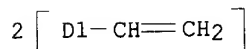
● Cl<sup>-</sup>

CM 2

CRN 1321-74-0

CMF C10 H10

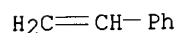
CCI IDS



CM 3

CRN 100-42-5

CMF C8 H8



IT 56343-12-5DP, Styrene-trihexyl-p-styrenylmethyllumonium chloride  
copolymer, reaction products with dye  
74443-77-9DP, reaction products with azidonaphthalene sulfonic  
acid

RL: DEV (Device component use); MOA (Modifier or additive use); PNU  
(Preparation, unclassified); PREP (Preparation); USES (Uses)  
(presensitized lithog. plate with photosensitive layer contg.  
microgel and backcoat layer)

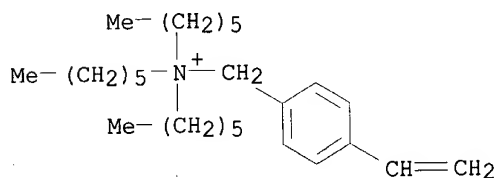
RN 56343-12-5 HCAPLUS

CN Benzenemethanaminium, 4-ethenyl-N,N,N-trihexyl-, chloride, polymer with  
ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 56343-11-4

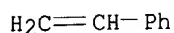
CMF C27 H48 N . Cl

● Cl<sup>-</sup>

CM 2

CRN 100-42-5

CMF C8 H8



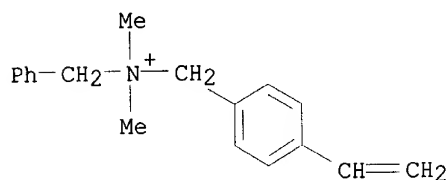
RN 74443-77-9 HCAPLUS

CN Benzenemethanaminium, 4-ethenyl-N,N-dimethyl-N-(phenylmethyl)-, chloride,  
polymer with diethenylbenzene and ethenylbenzene (9CI) (CA INDEX NAME)

CM 1

CRN 66099-76-1

CMF C18 H22 N . Cl

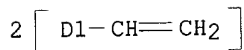
● Cl<sup>-</sup>

CM 2

CRN 1321-74-0

CMF C10 H10

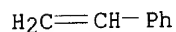
CCI IDS



CM 3

CRN 100-42-5

CMF C8 H8



L85 ANSWER 17 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1999:238783 HCAPLUS

DN 130:318624

TI Photosensitive material containing infrared absorber and agent for

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

multiplying acid or diazo compound for **lithographic** plate

IN Kudou, Shinji

PA Konica Co., Japan

SO Jpn. Kokai Tokkyo Koho, 41 pp.  
CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03F007-004  
ICS G03F007-004; B41N001-14; G03F007-00

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 11102066	A2	19990413	JP 1997-261914	19970926

AB The title material comprises a support coated with a photosensitive layer contg. (a) a compd. generating acid under active ray irradiation, (b) a compd. having an acid-decomposable portion, (c) an IR absorbent, and either (d) an acid-multiplying agent or (e) a diazo compd. The photosensitive layer may contain (a), (c), either (d) or (e), and a compd. which becomes insol. in alkali in the presence of acid. The material using IR exposure system shows improved storage stability and photosensitivity.

ST **lithog** plate photosensitive material acid multiplying; IR absorber diazo compd **lithog** plate; storage stability IR exposure **lithog** plate

IT **Cyanine** dyes  
Optical materials  
Optical materials  
(IR absorbers; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT IR materials  
IR materials  
(absorbers; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT Aminoplasts  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid-insolubilizing agent; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT Azo compounds  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT **Lithographic** plates  
(presensitized; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT Phenolic resins, uses  
RL: TEM (Technical or engineered material use); USES (Uses)  
(resol, acid-insolubilizing agent; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

IT 23178-67-8 115970-68-8 173474-43-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(IR absorbers; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog**. plate with storage stability)

- IT 134335-38-9P 223391-81-9P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(acid generator; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 4257-81-2 42573-57-9, TAZ 110 80309-01-9 219736-12-6  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid generator; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 3089-11-0, Hexamethoxymethylmelamine 212693-31-7, CKP 918  
RL: TEM (Technical or engineered material use); USES (Uses)  
(acid-insolubilizing agent; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 25266-14-2P, Ethylene oxide-formaldehyde copolymer 115815-82-2P  
215865-74-0P, Cyclohexanone-ethylene glycol copolymer  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(decomposable; photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 108-94-1, Cyclohexanone, reactions 122-99-6, Phenyl Cellosolve  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate contg. decomposable compd. from)
- IT 16941-11-0DP, Ammonium hexafluorophosphate, reaction product with diazonium resin 32762-05-3DP, 4-Diazodiphenylamine hydrogen sulfate-p-hydroxybenzoic acid-formaldehyde copolymer, reaction product with ammonium hexafluorophosphate 41432-19-3DP, 4-Diazodiphenylamine hydrogen sulfate-formaldehyde copolymer, reaction product with ammonium hexafluorophosphate  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 75620-67-6 138806-47-0 168281-30-9 169262-39-9 184289-71-2  
188590-03-6 200441-10-7 202058-60-4 223433-60-1 223433-62-3  
223571-08-2  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- IT 32762-05-3DP, 4-Diazodiphenylamine hydrogen sulfate-p-hydroxybenzoic acid-formaldehyde copolymer, reaction product with ammonium hexafluorophosphate 41432-19-3DP, 4-Diazodiphenylamine hydrogen sulfate-formaldehyde copolymer, reaction product with ammonium hexafluorophosphate  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(photosensitive material contg. IR absorber and agent for multiplying acid or diazo compd. for **lithog.** plate with storage stability)
- RN 32762-05-3 HCAPLUS  
CN Benzenediazonium, 4-(phenylamino)-, sulfate (1:1), polymer with formaldehyde and 4-hydroxybenzoic acid (9CI) (CA INDEX NAME)

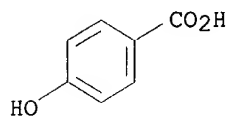
LEE 09/828075

Page 84

CM 1

CRN 99-96-7

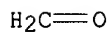
CMF C7 H6 O3



CM 2

CRN 50-00-0

CMF C H2 O



CM 3

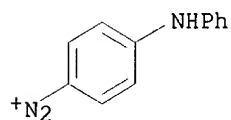
CRN 4477-28-5

CMF C12 H10 N3 . H O4 S

CM 4

CRN 16072-57-4

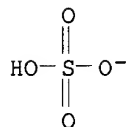
CMF C12 H10 N3



CM 5

CRN 14996-02-2

CMF H O4 S



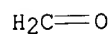
RN 41432-19-3 HCAPLUS

CN Benzenediazonium, 4-(phenylamino)-, sulfate (1:1), polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1



CRN 50-00-0  
CMF C H2 O

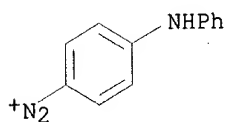


CM 2

CRN 4477-28-5  
CMF C12 H10 N3 . H O4 S

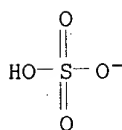
CM 3

CRN 16072-57-4  
CMF C12 H10 N3



CM 4

CRN 14996-02-2  
CMF H O4 S



L85 ANSWER 18 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1999:140948 HCAPLUS  
DN 130:215889  
TI Photosensitive lithographic printing plate having  
oil-desensitized and concaved surface edges  
IN Aono, Koichiro  
PA Fuji Photo Film Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 12 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM G03F007-09  
ICS G03F007-00  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)  
FAN.CNT 1

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
-----	---	-----	-----	-----

PI JP 11052579 A2 19990226 JP 1997-212201 19970806  
AB The photosensitive **lithog.** printing plate has a light-sensitive layer on a hydrophilic aluminum support surface, wherein the surfaces of facing sides of the aluminum support are hydrophilisized and has concave shape and oil-desensitization treatment. The photosensitive **lithog.** printing plate generates little soiling on an image receiving sheet.  
ST photosensitive **lithog** printing plate aluminum support; hydrophilisize concave oil desensitization soiling  
IT **Lithographic** plates  
(photosensitive **lithog.** printing plate)  
IT 89-25-8DP, 1-Phenyl-3-methyl-5-pyrazolone, reaction products with hexafluorophosphate-exchanged p-diazodiphenylamine sulfate-formaldehyde copolymer **9070-36-4DP**, p-Diazodiphenylamine sulfate-paraformaldehyde **copolymer**, hexafluorophosphate-exchanged, reaction products with 1-phenyl-3-methyl-5-pyrazolone 19735-89-8DP, 1-Phenyl-3-methyl-5-pyrazolone, reaction product with 4-Diazodiphenylamine sulfate-formaldehyde polymer  
RL: PNU (Preparation, unclassified); RCT (Reactant); TEM (Technical or engineered material use); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
(**dye** for light-sensitive layer of photosensitive **lithog.** printing plate)  
IT 150-33-4, 4-Diazodiphenylamine sulfate 30525-89-4, Paraformaldehyde  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(**dye** for light-sensitive layer of photosensitive **lithog.** printing plate)  
IT 87-89-8, myo-Inositol 7664-38-2, Phosphoric acid, processes 9000-01-5, Gum arabic 50813-16-6, Sodium metaphosphate  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(oil-desensitization treatment for photosensitive **lithog.** printing plate)  
IT **9070-36-4DP**, p-Diazodiphenylamine sulfate-paraformaldehyde **copolymer**, hexafluorophosphate-exchanged, reaction products with 1-phenyl-3-methyl-5-pyrazolone  
RL: PNU (Preparation, unclassified); RCT (Reactant); TEM (Technical or engineered material use); **PREP (Preparation)**; RACT (Reactant or reagent); USES (Uses)  
(**dye** for light-sensitive layer of photosensitive **lithog.** printing plate)  
RN 9070-36-4 HCAPLUS  
CN Benzenediazonium, 4-(phenylamino)-, sulfate (2:1), polymer with formaldehyde (9CI) (CA INDEX NAME)  
CM 1  
CRN 50-00-0  
CMF C H2 O

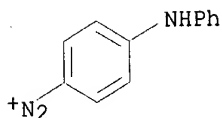
H<sub>2</sub>C=O

CM 2

CRN 150-33-4  
CMF C12 H10 N3 . 1/2 O4 S

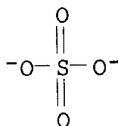
CM 3

CRN 16072-57-4  
CMF C12 H10 N3



CM 4

CRN 14808-79-8  
CMF 04 S



L85 ANSWER 19 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1997:752715 HCAPLUS  
DN 128:55426  
TI Light-sensitive diazonium compound having both bisulfate and zincate parts  
for lithographic plate preparation  
IN Deutsch, Albert S.  
PA Precision Lithograining Corp., USA  
SO U.S., 10 pp.  
CODEN: USXXAM  
DT Patent  
LA English  
IC ICM G03F007-021  
NCL 430157000  
CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5688627	A	19971118	US 1996-677438	19960702
AB	A water-sol. diazonium compd. made by the condensation of a diazoaryl amine and an aldehyde and pptd. to form a polymeric anionic species having both $ZnCl_4^{2-}$ and $HSO_4^-$ moieties is disclosed. The compd. is blended with a suitable binder, a colorant, and other optional components to produce a light-sensitive coating compn. for the prepn. of a lithog. plate. When applied to an aluminum substrate, the light-sensitive coating compn. forms a lithog. plate esp. stable for use under high humidity conditions. Such a light-sensitive coating compn. may be developed by either water alone or by water contg. surfactants and/or a small amt. of an org. solvent.				
ST	photosensitive diazonium compd lithog plate; bisulfate zincate diazonium compd lithog plate				
IT	Photoimaging materials (contg. diazonium compds. having both bisulfate and zincate parts for				

lithog. plate prepn.)

IT Diazonium compounds  
RL: TEM (Technical or engineered material use); USES (Uses)  
(having both bisulfate and zincate parts for photosensitive compns. for lithog. plate prepn.)

IT Lithographic plates  
(photosensitive compns. contg. diazonium compds. having both bisulfate and zincate parts for prepn. of)

IT 147-14-8, Copper **phthalocyanine** 24937-78-8, Ethylene-vinyl acetate copolymer 37211-53-3, Triton CF-21  
RL: TEM (Technical or engineered material use); USES (Uses)  
(lithog. plate prepn. using photosensitive compns. contg. diazonium compds. and)

IT 41432-19-3DP, mixed salt with tetrachlorozincate  
67290-46-4DP, mixed salt with bisulfate  
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(prepn. and use in photosensitive compns. for lithog. plate prepn.)

IT 50-00-0, Formaldehyde, reactions 4477-28-5  
RL: RCT (Reactant); TEM (Technical or engineered material use); RACT (Reactant or reagent); USES (Uses)  
(reaction in prepn. of diazonium compds. for use in photosensitive compns. for lithog. plate prepn.)

IT 41432-19-3DP, mixed salt with tetrachlorozincate  
67290-46-4DP, mixed salt with bisulfate  
RL: **SPN (Synthetic preparation)**; TEM (Technical or engineered material use); **PREP (Preparation)**; USES (Uses)  
(prepn. and use in photosensitive compns. for lithog. plate prepn.)

RN 41432-19-3 HCAPLUS  
CN Benzenediazonium, 4-(phenylamino)-, sulfate (1:1), polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 50-00-0  
CMF C H2 O

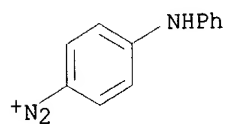
H<sub>2</sub>C=O

CM 2

CRN 4477-28-5  
CMF C12 H10 N3 . H O4 S

CM 3

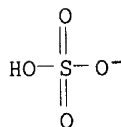
CRN 16072-57-4  
CMF C12 H10 N3



CM 4

CRN 14996-02-2

CMF H O4 S

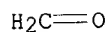


RN 67290-46-4 HCAPLUS  
CN Benzenediazonium, 4-(phenylamino)-, (T-4)-tetrachlorozincate(2-) (2:1),  
polymer with formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 50-00-0

CMF C H2 O



CM 2

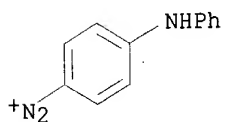
CRN 36505-86-9

CMF C12 H10 N3 . 1/2 C14 Zn

CM 3

CRN 16072-57-4

CMF C12 H10 N3

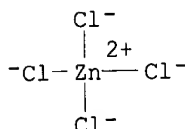


CM 4

CRN 15201-05-5

CMF C14 Zn

CCI CCS



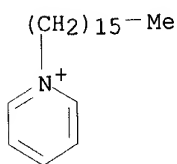
- L85 ANSWER 20 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1997:655780 HCAPLUS  
 DN 127:293898  
 TI Structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions  
 AU Bobrov, A. B.; Skorikova, E. E.; Sul'Yanov, S. N.; Rogacheva, V. B.; Zezin, A. B.; Kabanov, V. A.  
 CS Shubnikov Inst. Crystallography, Moscow State Univ., Moscow, 119899, Russia  
 SO Vysokomolekulyarnye Soedineniya, Seriya A i Seriya B (1997), 39(4), 627-631  
 CODEN: VSSBEE; ISSN: 1023-3091  
 PB MAIK Nauka  
 DT Journal  
 LA Russian  
 CC 36-5 (Physical Properties of Synthetic High Polymers)  
 Section cross-reference(s): 38  
 AB The structure and sorption properties of a stoichiometric polymer-colloid complex, formed by polyacrylate anions and cetylpyridinium cations, were studied. The complex is essentially a cetylpyridinium salt of polyacrylic acid and comprises pos. charged surfactant lamellae linked by salt bonds to polyacrylate anions. The aliph. radicals of cetylpyridinium form a cryst. hexagonal packing inside the lamellae. The polymer-colloid complex has an amphiphilic character and is capable of limited swelling in water and org. solvents of various polarities. The swelling in water and low-polarity org. substances is accompanied by strong modification of the complex structure. During the co-adsorption of satd. vapors of water and low-polarity org. substances, the equil. degree of swelling was markedly greater as compared to that following from the additive model.  
 ST lamellar cryst structure cetylpyridinium polyacrylate; sorption water vapor cetylpyridinium polyacrylate; acetone sorption sodium polyacrylate cetylpyridinium complex; dioxane sorption sodium polyacrylate cetylpyridinium complex; chloroform sorption sodium polyacrylate cetylpyridinium complex; toluene sorption sodium polyacrylate cetylpyridinium complex; heptane sorption sodium polyacrylate cetylpyridinium complex; carbon tetrachloride sorption polyacrylate cetylpyridinium complex; diethyl ether sorption polyacrylate cetylpyridinium complex; sodium polyacrylate cetylpyridinium bromide complex structure  
 IT Surfactants  
 (amphiphilic; structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)  
 IT Polymer morphology  
 (lamellar; structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)  
 IT Solubility  
 Sorption  
 Swelling, physical  
 (structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)

- IT Polyelectrolytes  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)
- IT 56-23-5, Carbon tetrachloride, processes 60-29-7, Diethyl ether, processes 67-64-1, 2-Propanone, processes 67-66-3, Chloroform, processes 108-88-3, Toluene, processes 123-91-1, 1,4-Dioxane, processes 142-82-5, Heptane, processes 7732-18-5, Water, processes  
RL: PEP (Physical, engineering or chemical process); PROC (Process)  
(sorbate; structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)
- IT 197250-22-9P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)
- IT 140-72-7, Cetylpyridinium bromide 9003-04-7, Polyacrylic acid, sodium salt  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)
- IT 197250-22-9P  
RL: PRP (Properties); SPN (Synthetic preparation); PREP (Preparation)  
(structure and sorption properties of a polymer-colloid complex formed by cetylpyridinium cations and polyacrylate anions)
- RN 197250-22-9 HCAPLUS  
CN Pyridinium, 1-hexadecyl-, bromide, compd. with 2-propenoic acid homopolymer sodium salt (9CI) (CA INDEX NAME)

CM 1

CRN 140-72-7

CMF C21 H38 N . Br

● Br<sup>-</sup>

CM 2

CRN 9003-04-7

CMF (C3 H4 O2)x . x Na

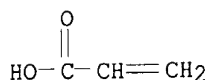
CM 3

CRN 9003-01-4

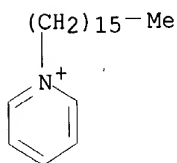
CMF (C3 H4 O2)x

CCI PMS

CM 4

CRN 79-10-7  
CMF C3 H4 O2

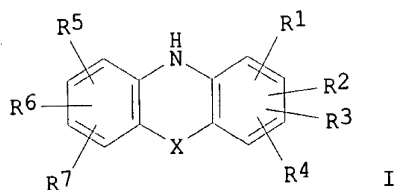
IT 140-72-7, Cetylpyridinium bromide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(structure and sorption properties of a polymer-colloid complex formed  
by cetylpyridinium cations and polyacrylate anions)  
RN 140-72-7 HCAPLUS  
CN Pyridinium, 1-hexadecyl-, bromide (8CI, 9CI) (CA INDEX NAME)

● Br<sup>-</sup>

L85 ANSWER 21 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1997:509311 HCAPLUS  
DN 127:206938  
TI Oxidatively polymerizable coloring materials and their nonreversible color  
change by polymerization  
IN Yanagi, Masato; Ishiguro, Hideyuki; Sato, Keiichi; Kamimura, Toshifumi  
PA Toyo Ink Mfg. Co., Ltd., Japan  
SO Jpn. Kokai Tokkyo Koho, 8 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C09B021-00  
ICS B32B027-18; B41M005-132; C07D265-38; C09B019-00; C09B069-10;  
C09D011-16  
CC 41-5 (Dyes, Organic Pigments, Fluorescent Brighteners, and Photographic  
Sensitizers)  
Section cross-reference(s): 35, 42, 74  
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 09194747	A2	19970729	JP 1996-7968	19960122
	JP 3180649	B2	20010625		
GI					





- AB The materials, useful for writing tools, pressure-sensitive copying paper, recording paper, or toys, comprise (A) layers contg. oxidatively polymerizable colorants I [R1-R7 = H, halo, C1-8 alkyl, C1-8 alkoxy, (un)substituted (hetero)aryl, OH, NH2, CN, CHO, CO2H, NO2, NO, or 2 groups may join to form arom. rings; X = S, O, Se, Te] on supports and (B) oxidizing agents kept out of contact with A. The color of the materials is changed by polymn. of A in contact with B. Thus, 100 parts Et acrylate-Me acrylate copolymer was mixed with 12 parts 10% 2-methoxyphenothiazine in EtOAc, coated on a PET release film, and dried to form a sheet. Sep., a felt was impregnated with a 100:2 mixt. of MeOH and CuCl2 to obtain a marking pen, which was used in writing on the sheet to show a green color initially, which then changed to blue, purple, and brown with passage of time.
- ST oxidative polymn phenothiazine color change; writing tool phenothiazine color change; toy phenothiazine oxidative polymn color change; recording paper phenothiazine color change; pressure sensitive copying paper phenothiazine
- IT Quinones  
RL: CAT (Catalyst use); USES (Uses)  
(naphthoquinones, oxidizing agents; oxidative polymn. of phenothiazines for nonreversible color change)
- IT Peroxides, uses  
RL: CAT (Catalyst use); USES (Uses)  
(org., oxidizing agents; oxidative polymn. of phenothiazines for nonreversible color change)
- IT Color  
Oxidizing agents  
Pens  
Toys  
(oxidative polymn. of phenothiazines for nonreversible color change)
- IT Polymerization  
Polymerization catalysts  
(oxidative; oxidative polymn. of phenothiazines for nonreversible color change)
- IT Halogens  
Oxides (inorganic), uses  
Peroxy acids  
Peroxy sulfates  
Quinones  
Salts, uses  
RL: CAT (Catalyst use); USES (Uses)  
(oxidizing agents; oxidative polymn. of phenothiazines for nonreversible color change)
- IT **Printing** (nonimpact)  
(paper; oxidative polymn. of phenothiazines for nonreversible color change)
- IT Copying paper  
(pressure-sensitive; oxidative polymn. of phenothiazines for nonreversible color change)

IT 75788-67-9P 113254-03-8P 194475-58-6P  
194475-59-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(oxidative polymn. of phenothiazines for nonreversible color change)

IT 92-30-8, 2-(Trifluoromethyl)phenothiazine 92-84-2, Phenothiazine 135-67-1, Phenoxazine 1771-18-2, 2-Methoxyphenothiazine  
RL: TEM (Technical or engineered material use); USES (Uses)  
(oxidative polymn. of phenothiazines for nonreversible color change)

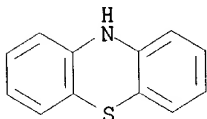
IT 67-68-5, Dimethyl sulfoxide, uses 84-58-2, 2,3-Dichloro-5,6-dicyano-1,4-benzoquinone 94-36-0, Benzoyl peroxide, uses 614-45-9, tert-Butyl peroxybenzoate 7447-39-4, Copper dichloride, uses  
RL: CAT (Catalyst use); USES (Uses)  
(oxidizing agents; oxidative polymn. of phenothiazines for nonreversible color change)

IT 75788-67-9P 194475-58-6P 194475-59-7P  
RL: IMF (Industrial manufacture); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
(oxidative polymn. of phenothiazines for nonreversible color change)

RN 75788-67-9 HCAPLUS  
CN 10H-Phenothiazine, homopolymer (9CI) (CA INDEX NAME)

CM 1

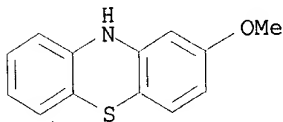
CRN 92-84-2  
CMF C12 H9 N S



RN 194475-58-6 HCAPLUS  
CN 10H-Phenothiazine, 2-methoxy-, homopolymer (9CI) (CA INDEX NAME)

CM 1

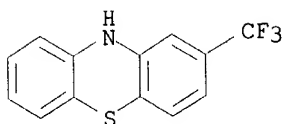
CRN 1771-18-2  
CMF C13 H11 N O S



RN 194475-59-7 HCAPLUS  
CN 10H-Phenothiazine, 2-(trifluoromethyl)-, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 92-30-8  
CMF C13 H8 F3 N S



L85 ANSWER 22 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1996:660714 HCAPLUS

DN 125:290781

TI Manufacture of printed circuit boards by electrophotography

IN Inoe, Wakana; Hyodo, Kenji

PA Mitsubishi Paper Mills Ltd, Japan

SO Jpn. Kokai Tokkyo Koho, 9 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM G03G005-07

ICS G03G005-06; H05K001-09; H05K003-06; H05K003-24

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 38, 74

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 08211639	A2	19960820	JP 1995-18233	19950206
AB	The manuf. of a <b>printed</b> circuit comprises <b>formation</b> of (A) a photoconductor layer on an elec. conductor layer laminated on an elec. insulating board, (B) formation of a toner image on the photoconductor layer by electrophotog., (C) eluting the photoconductor layer area without the image, (D) etching the elec. conductor layer of the eluted photoconductor area, and (E) removing the remaining photoconductor layer and a toner image as require and the manuf. is characterized by the use of a photoconductive resin contg. (a) 10-90% a polymerizable monomer having a carbazole group and/or a polymerizable monomer having a <b>phthalocyanine</b> group as a polymerizable component and (b) 10-40% polymerizable monomers having an anionic functional group for the photoconductor layer.				
ST	carbazole polymer photoconductor printed circuit; <b>phthalocyanine</b> polymer photoconductor printed circuit; reversal development toner image printed circuit; electrodeposition photoconductor printed circuit				
IT	Electrophotographic photoconductors and photoreceptors (manuf. of printed circuit boards by electrophotog.)				
IT	Electrophotographic development (reversal; manuf. of printed circuit boards by electrophotog.)				
IT	Electric circuits (printed, boards, manuf. of printed circuit boards by electrophotog.)				
IT	182865-04-9P, Acrylic acid-butyl methacrylate-9-vinylcarbazole copolymer 182865-05-0P, Butyl methacrylate-methacrylic acid-9-vinylcarbazole copolymer 182865-06-1P, Acrylic acid-butyl methacrylate-4-nitro-9-vinylcarbazole copolymer 182865-07-2P, Cobalt <b>phthalocyaninetetracarboxylic</b> acid tetraester with ethylene glycol, acrylate, polymer with 9-vinylcarbazole, methacrylic acid, butyl methacrylate, and butyl acrylate 182865-08-3P, Cobalt <b>phthalocyaninetetracarboxylic</b> acid tetraester with ethylene glycol, acrylate, polymer with methacrylic acid, butyl methacrylate, and butyl acrylate 182865-09-4P, Cobalt <b>phthalocyaninetetracarboxylic</b> acid tetraester with ethylene glycol, acrylate, polymer with acrylic acid, butyl methacrylate, and butyl				

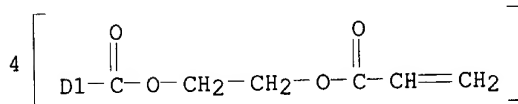
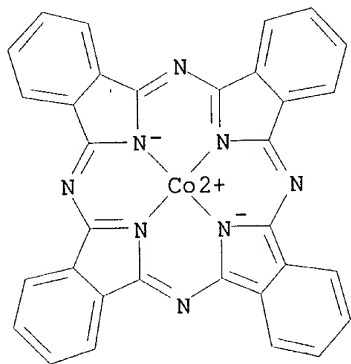
- acrylate 182865-10-7P, Butyl methacrylate-methacrylic acid-4-nitro-9-vinylcarbazole copolymer  
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)  
 (manuf. of printed circuit boards by electrophotog.)
- IT 182865-07-2P, Cobalt **phthalocyaninetetracarboxylic** acid tetraester with ethylene glycol, acrylate, polymer with 9-vinylcarbazole, methacrylic acid, butyl methacrylate, and butyl acrylate  
 182865-08-3P, Cobalt **phthalocyaninetetracarboxylic** acid tetraester with ethylene glycol, acrylate, polymer with methacrylic acid, butyl methacrylate, and butyl acrylate 182865-09-4P, Cobalt **phthalocyaninetetracarboxylic** acid tetraester with ethylene glycol, acrylate, polymer with acrylic acid, butyl methacrylate, and butyl acrylate  
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)  
 (manuf. of printed circuit boards by electrophotog.)
- RN 182865-07-2 HCAPLUS  
 CN Cobalt, [tetrakis[2-[(1-oxo-2-propenyl)oxy]ethyl] 29H,31H-phthalocyanine-C,C,C,C-tetracarboxylato(2-)-N29,N30,N31,N32]-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate, 9-ethenyl-9H-carbazole and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

CRN 101240-49-7

CMF C56 H40 Co N8 O16

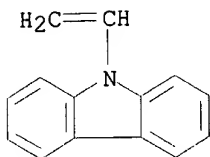
CCI CCS, IDS



CM 2

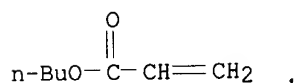
CRN 1484-13-5

CMF C14 H11 N



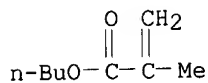
CM 3

CRN 141-32-2  
CMF C7 H12 O2



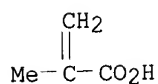
CM 4

CRN 97-88-1  
CMF C8 H14 O2



CM 5

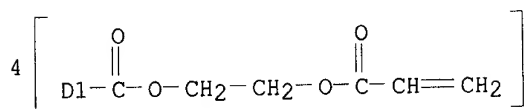
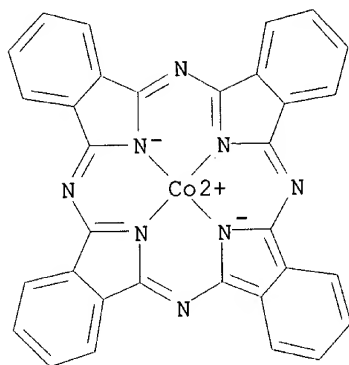
CRN 79-41-4  
CMF C4 H6 O2



RN 182865-08-3 HCAPLUS  
CN Cobalt, [tetrakis[2-[(1-oxo-2-propenyl)oxy]ethyl] 29H,31H-phthalocyanine-C,C,C,C-tetracarboxylato(2-)-N29,N30,N31,N32]-, polymer with butyl 2-methyl-2-propenoate, butyl 2-propenoate and 2-methyl-2-propenoic acid (9CI) (CA INDEX NAME)

CM 1

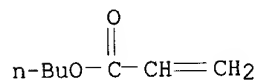
CRN 101240-49-7  
CMF C56 H40 Co N8 O16  
CCI CCS, IDS



CM 2

CRN 141-32-2

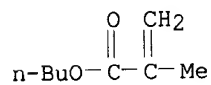
CMF C7 H12 O2



CM 3

CRN 97-88-1

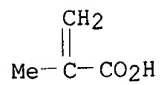
CMF C8 H14 O2



CM 4

CRN 79-41-4

CMF C4 H6 O2



RN 182865-09-4 HCAPLUS

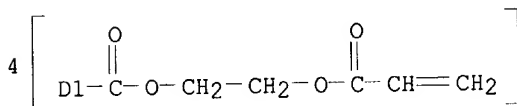
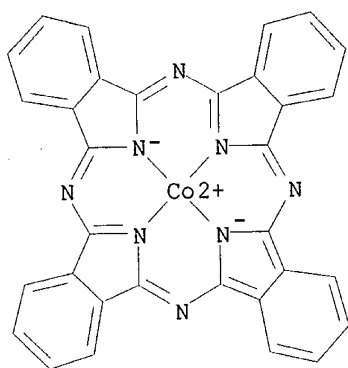
CN Cobalt, [tetrakis[2-[(1-oxo-2-propenyl)oxy]ethyl] 29H,31H-phthalocyanine-  
C,C,C,C-tetracarboxylato(2-)-N29,N30,N31,N32]-, polymer with butyl  
2-methyl-2-propenoate, butyl 2-propenoate and 2-propenoic acid (9CI) (CA  
INDEX NAME)

CM 1

CRN 101240-49-7

CMF C56 H40 Co N8 O16

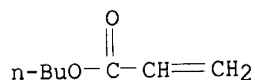
CCI CCS, IDS



CM 2

CRN 141-32-2

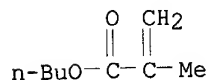
CMF C7 H12 O2



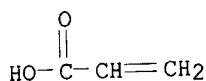
CM 3

CRN 97-88-1

CMF C8 H14 O2



CM 4

CRN 79-10-7  
CMF C3 H4 O2

L85 ANSWER 23 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1996:302911 HCAPLUS  
DN 125:45126  
TI Photosensitive resin composition  
IN Gybin, Alexander S.; Van Iseghem, Lawrence C.  
PA Chromaline Corp., USA  
SO U.S., 11 pp., Division of U. S. Ser. No. 28, 420.  
CODEN: USXXAM

DT Patent

LA English

IC ICM G03C001-73

NCL 430287000

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

FAN.CNT 2

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	US 5506089	A	19960409	US 1994-195258	19940214
	US 6020436	A	20000201	US 1993-28420	19930309
PRAI	US 1993-28420		19930309		

GI For diagram(s), see printed CA Issue.

AB A universal method to make photosensitive polymers from poly(vinyl alc.) and poly(vinyl **pyridine**) is disclosed which generally does not require final purifn. and can produce photosensitive polymers which are of similar photosensitivity whether prepd. with a poly(vinyl alc.) or poly(vinyl **pyridine**) backbone. These polymers comprise a heterocyclic, light-sensitive pendant group including a moiety having the formula I or II wherein Z1 denotes the atoms necessary to form a substituted or unsubstituted arom. heterocyclic ring; Z2 denotes the atoms necessary to form a substituted or unsubstituted arom. or arom. heterocyclic ring; R is hydrogen or a substituted or unsubstituted alkyl group; Y is a residue from a grafting group that is capable of grafting the pendant group onto a polymeric backbone; n is 1 or 2.

ST photoresist screen printing **styrylpyridinium** polymer

IT Stencils

(photosensitive compns. contg. **styrylpyridinium** group-contg. polymers for)

IT Resists

(photo-, contg. **styrylpyridinium** group-contg. polymers for screen printing)IT **Printing plates**(screen, photosensitive compns. contg. **styrylpyridinium** group-contg. polymers for)

IT 178058-92-9P

RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

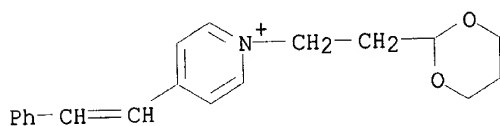


- (9; prepn. and reaction in prepg. **styrylpyridinium** group-contg. polymers for photosensitive compns.)
- IT 718-24-1P 722-21-4P 4945-26-0P, 2-**Styrylquinoline**  
 178058-90-7P 178058-91-8P 178058-93-0P 178058-94-1P 178058-95-2P  
 178059-00-2P 178059-01-3P  
 RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
 (prepn. and reaction in prepg. **styrylpyridinium** group-contg. polymers for photosensitive compns.)
- IT 178058-96-3P 178058-97-4P 178058-99-6P  
 178059-02-4P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. and use in photosensitive compns.)
- IT 103-31-1, 4-**Styrylpyridine** 110-52-1, 1,4-Dibromobutane  
 629-03-8, 1,6-Dibromohexane  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reaction in prepg. **styrylpyridinium** group-contg. polymers for photosensitive compns.)
- IT 178058-96-3P 178058-97-4P 178058-99-6P  
 178059-02-4P  
 RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses)  
 (prepn. and use in photosensitive compns.)
- RN 178058-96-3 HCAPLUS  
 CN Pyridinium, 1-[2-(1,3-dioxan-2-yl)ethyl]-4-(2-phenylethenyl)-, bromide, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

CRN 178058-92-9

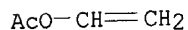
CMF C19 H22 N O2 . Br

● Br<sup>-</sup>

CM 2

CRN 108-05-4

CMF C4 H6 O2



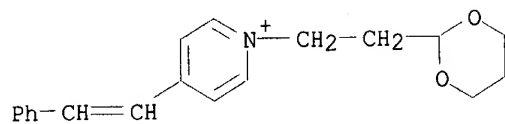
RN 178058-97-4 HCAPLUS

CN Pyridinium, 1-[2-(1,3-dioxan-2-yl)ethyl]-4-(2-phenylethenyl)-, bromide, polymer with ethenol (9CI) (CA INDEX NAME)

CM 1

CRN 178058-92-9

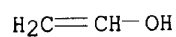
CMF C19 H22 N O2 . Br

● Br<sup>-</sup>

CM 2

CRN 557-75-5

CMF C2 H4 O



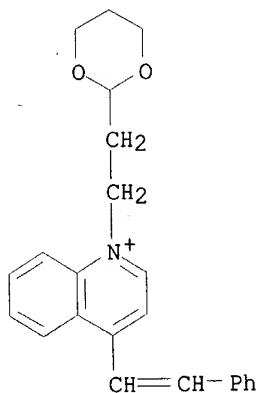
RN 178058-99-6 HCAPLUS

CN Quinolinium, 1-[2-(1,3-dioxan-2-yl)ethyl]-4-(2-phenylethenyl)-, bromide, polymer with ethenyl acetate (9CI) (CA INDEX NAME)

CM 1

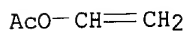
CRN 178058-98-5

CMF C23 H24 N O2 . Br

● Br<sup>-</sup>

CM 2

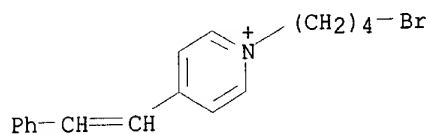
CRN 108-05-4  
CMF C4 H6 O2



RN 178059-02-4 HCAPLUS  
CN Pyridinium, 1-(4-bromobutyl)-4-(2-phenylethenyl)-, bromide, polymer with  
4-ethenylpyridine (9CI) (CA INDEX NAME)

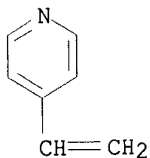
CM 1

CRN 178059-01-3  
CMF C17 H19 Br N . Br



CM 2

CRN 100-43-6  
CMF C7 H7 N



L85 ANSWER 24 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1995:1005423 HCAPLUS  
DN 124:41190  
TI Spatial Electrochromism in Metallopolymeric Films of Ruthenium Polypyridyl  
Complexes  
AU Leasure, Robert M.; Ou, Wei; Moss, John A.; Linton, Richard W.; Meyer,  
Thomas J.  
CS Department of Chemistry, University of North Carolina, Chapel Hill, NC,  
NORTH CAROLINA, USA  
SO Chemistry of Materials (1996), 8(1), 264-73  
CODEN: CMATEX; ISSN: 0897-4756  
PB American Chemical Society  
DT Journal  
LA English  
CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other  
Reprographic Processes)

- Section cross-reference(s): 73
- AB Thin films of poly[Ru(vbpy)2(py)2]2+ (vbpy is 4-vinyl-4'-methyl-2,2'-**bipyridine**; py is **pyridine**) have been deposited on electrodes by reductive electropolymerization. Photolysis of the film in the presence of chloride ion leads to photochem. loss of the **pyridine** ligands and sequential formation of poly[Ru(vbpy)2(py)Cl]+ and poly[Ru(vbpy)2Cl2], as detd. by cyclic voltammetry and FTIR spectroscopy. Contact **lithog.** was used to control the photosubstitution process spatially and form laterally resolved, bicomponent films with image resolu. below 10 .mu.m. Small spot XPS was used to confirm that the photolyzed and nonphotolyzed regions of an imaged film were chem. distinct. Dramatic changes occur in the absorption spectra and redox potentials of the ruthenium complexes upon substitution of chloride for the **pyridine** ligands. This provides a basis for the fabrication of bicomponent, electrochromic film assemblies on optically transparent electrodes of tin doped indium oxide on glass. The spectroelectrochem. response of these films has been studied by slow scan cyclic voltammetry and potential step chronoamperometry.
- ST electrochromism ruthenium **bipyridine** complex polymer  
**lithog**; photolysis electropolymerized ruthenium **bipyridine**  
**vinylmethylbipyridine lithog**; photolithog imaging  
ruthenium **bipyridine vinylmethylbipyridine** polymer
- IT Ultraviolet and visible spectra  
(photolithog. imaging of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride for electrochromic device fabrication)
- IT Photolysis  
(photolysis and **lithog.** imaging of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride for electrochromic device fabrication)
- IT Photography  
(photolysis of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride for electrochromic device fabrication)
- IT Electrochromism  
(spatial; of products of photolysis and **lithog.** photoimaging of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride)
- IT Optical imaging devices  
(electrochromic, photolithog. imaging of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride for electrochromic device fabrication)
- IT **Lithography**  
(photo-, photolysis and **lithog.** imaging of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) film in presence of chloride for electrochromic device fabrication)
- IT Substitution reaction  
(photochem., in thin electropolymerized films of bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium(2+) film in presence of chloride for electrochromic device fabrication)
- IT Electric potential  
(redox, of poly[bis(**vinylmethylbipyridine**)bis(**bipyridine**)ruthenium](2+) and its photoproducts produced in presence of chloride)
- IT 171899-53-9 171899-54-0  
RL: PRP (Properties)  
(elec. potential of)
- IT 171899-56-2P  
RL: PNU (Preparation, unclassified); PRP (Properties); PREP (Preparation)  
(electronic absorption spectra of)

IT 124815-46-9  
RL: PRP (Properties)  
(electronic absorption spectra of)

IT 104704-09-8, 4-Formyl-4'-methyl-2,2'-bipyridine  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(in prepn. of vinylmethylbipyridine)

IT 171899-51-7 171899-52-8 171899-60-8  
RL: FMU (Formation, unclassified); PEP (Physical, engineering or chemical process); PRP (Properties); FORM (Formation, nonpreparative); PROC (Process)  
(photolysis and lithog. imaging of poly[bis(vinylmethylbipyridine)bis(bipyridine)ruthenium] (2+) film in presence of chloride for electrochromic device fabrication)

IT 161272-31-7P 171899-58-4P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(photolysis and lithog. imaging of poly[bis(vinylmethylbipyridine)bis(bipyridine)ruthenium] (2+) film in presence of chloride for electrochromic device fabrication)

IT 1112-67-0, Tetrabutylammonium chloride  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photolysis and lithog. imaging of poly[bis(vinylmethylbipyridine)bis(bipyridine)ruthenium] (2+) film in presence of chloride for electrochromic device fabrication)

IT 80864-60-4P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(reaction with pyridine)

IT 74173-48-1P, 4-Methyl-4'-vinyl-2,2'-bipyridine  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(reaction with ruthenium chloride)

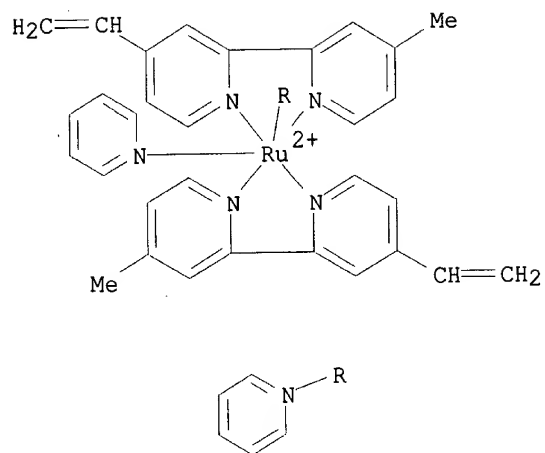
IT 171899-49-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(reductive electropolymn.)

IT 161272-31-7P 171899-58-4P  
RL: PEP (Physical, engineering or chemical process); PRP (Properties); RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); PROC (Process); RACT (Reactant or reagent)  
(photolysis and lithog. imaging of poly[bis(vinylmethylbipyridine)bis(bipyridine)ruthenium] (2+) film in presence of chloride for electrochromic device fabrication)

RN 161272-31-7 HCAPLUS  
CN Ruthenium(2+), bis(4-ethenyl-4'-methyl-2,2'-bipyridine-  
.kappa.N1,.kappa.N1')bis(pyridine)-, bis[hexafluorophosphate(1-)],  
homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 153824-72-7  
CMF C36 H34 N6 Ru  
CCI CCS

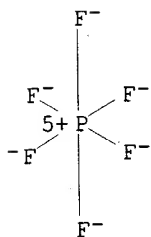


CM 2

CRN 16919-18-9

CMF F6 P

CCI CCS



RN 171899-58-4 HCAPLUS

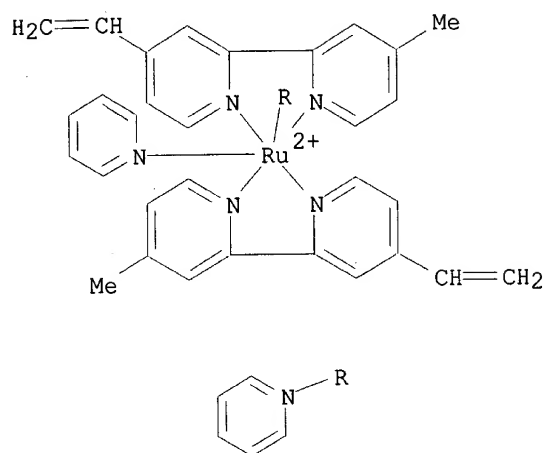
CN Ruthenium(2+), bis(4-ethenyl-4'-methyl-2,2'-bipyridine-N,N')bis(pyridine)-  
, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 171899-57-3

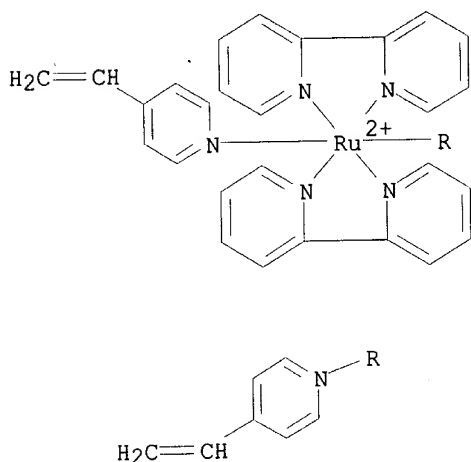
CMF C36 H34 N6 Ru . 2 Cl

CCI CCS



L85 ANSWER 25 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1995:863255 HCAPLUS  
 DN 123:325613  
 TI Photolithographically defined electropolymerized films. Fabrication of an electrochemically switchable diffraction grating comprised of poly-(bpy)2Ru(vpy)22+  
 AU Hauser, Brian T.; Bergstedt, Troy S.; Schanze, Kirk S.  
 CS Dep. Chem., Univ. Florida, Gainesville, FL, 32611-7200, USA  
 SO Journal of the Chemical Society, Chemical Communications (1995), (19), 1945-6  
 CODEN: JCCCAT; ISSN: 0022-4936  
 PB Royal Society of Chemistry  
 DT Journal  
 LA English  
 CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
 AB A combination of photolithog. and electropolymn. is utilized to fabricate spatially patterned films of poly-(bpy)2Ru(vpy)22+; the method has been applied to fabricate poly-(bpy)2Ru(vpy)22+ based diffraction gratings.  
 ST photolithog electropolymn ruthenium **pyridine** polymer photoresist  
 IT Diffraction gratings  
 (photolithog. and electropolymn. to fabricate spatially patterned films of ruthenium-**pyridine** polymer)  
 IT Polymerization  
 (electrochem., photolithog. and electropolymn. to fabricate spatially patterned films of ruthenium-**pyridine** polymer)  
 IT **Lithography**  
 (photo-, photolithog. and electropolymn. to fabricate spatially patterned films of ruthenium-**pyridine** polymer)  
 IT **88670-65-9P**  
 RL: PEP (Physical, engineering or chemical process); PNU (Preparation, unclassified); TEM (Technical or engineered material use); **PREP (Preparation)**; PROC (Process); USES (Uses)  
 (photolithog. and electropolymn. to fabricate spatially patterned films

of ruthenium-pyridine polymer)  
IT 3109-63-5, Tetrabutylammonium hexafluorophosphate 79813-96-0  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(photolithog. and electropolymn. to fabricate spatially patterned films  
of ruthenium-pyridine polymer)  
IT 76188-55-1, Poly(methylphenyl silane) 146088-00-8, Poly(methylphenyl  
silane)  
RL: TEM (Technical or engineered material use); USES (Uses)  
(photolithog. and electropolymn. to fabricate spatially patterned films  
of ruthenium-pyridine polymer)  
IT 88670-65-9P  
RL: PEP (Physical, engineering or chemical process); PNU (Preparation,  
unclassified); TEM (Technical or engineered material use); PREP  
(Preparation); PROC (Process); USES (Uses)  
(photolithog. and electropolymn. to fabricate spatially patterned films  
of ruthenium-pyridine polymer)  
RN 88670-65-9 HCAPLUS  
CN Ruthenium(2+), bis(2,2'-bipyridine-.kappa.N1,.kappa.N1')bis(4-  
ethenylpyridine)-, homopolymer (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 75687-40-0  
CMF C34 H30 N6 Ru  
CCI CCS



L85 ANSWER 26 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1995:839110 HCAPLUS  
DN 123:301601  
TI Preparation of 1,2-naphthoquinonediazide-4-sulfonic acid ester compound  
for presensitized lithographic plates  
IN Sasaki, Mitsuru; Oota, Katsuko; Matsuo, Fumyuki; Matsubara, Shinichi;  
Tono, Katsuhiko  
PA Mitsubishi Kagaku Kk, Japan; Konishiroku Photo Ind  
SO Jpn. Kokai Tokkyo Koho, 5 pp.  
CODEN: JKXXAF  
DT Patent  
LA Japanese  
IC ICM C08G008-28



ICS B01J031-02; G03F007-022; H01L021-027  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)

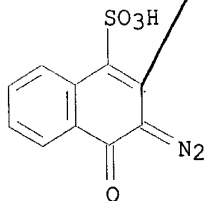
FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 07188365	A2	19950725	JP 1993-333252	19931227
AB	The ester compd. is prepd. by the reaction of <u>polyphenol</u> -contg. novolak resin and <u>1,2-naphthoquinonediazide-4-sulfonic acid compd.</u> in the presence of a nucleophilic catalyst. The nucleophilic catalyst may be tert. amine compd. or N-contg. heterocyclic compd. having pKa .ltoreq.7. The ester compd. is obtained in a <u>high</u> yield with a small amt. of color impurity.				
ST	<b>lithog</b> plate presensitized naphthoquinonediazidesulfonate novolak; nucleophilic catalyst naphthoquinonediazidesulfonate polyphenol novolak				
IT	Phenolic resins, reactions RL: RCT (Reactant); RACT (Reactant or reagent) (prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)				
IT	<b>Lithographic</b> plates (presensitized, prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)				
IT	108-89-4, 4-Methylpyridine	110-86-1, Pyridine,	uses RL: CAT (Catalyst use); USES (Uses) (prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)		
IT	36451-09-9, 1,2-Naphthoquinonediazide-4-sulfonyl chloride	38333-84-5, Acetone-pyrogallol copolymer	RL: RCT (Reactant); RACT (Reactant or reagent) (prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)		
IT	<b>58640-48-5P</b> RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)				
IT	<b>58640-48-5P</b> RL: SPN (Synthetic preparation); TEM (Technical or engineered material use); PREP (Preparation); USES (Uses) (prepn. of naphthoquinonediazidesulfonate of polyphenol-novolak for presensitized <b>lithog.</b> plates)				
RN	58640-48-5	HCAPIUS			
CN	2-Propanone, polymer with 1,2,3-benzenetriol, 3-diazo-3,4-dihydro-4-oxo-1-naphthalenesulfonate (9CI) (CA INDEX NAME)				

CM 1

CRN 20680-48-2

CMF C10 H6 N2 O4 S

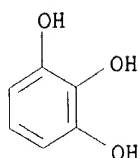


CM 2

CRN 38333-84-5  
CMF (C6 H6 O3 . C3 H6 O)x  
CCI PMS

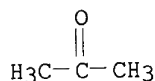
CM 3

CRN 87-66-1  
CMF C6 H6 O3



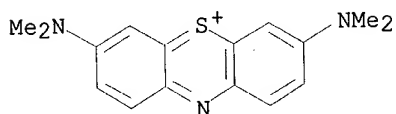
CM 4

CRN 67-64-1  
CMF C3 H6 O



L85 ANSWER 27 OF 46 HCAPLUS COPYRIGHT 2002/ACS  
AN 1995:725237 HCAPLUS  
DN 123:164528  
TI Reduction of thiazine dyes by bovine pulmonary arterial endothelial cells  
in culture  
AU Bongard, Robert D.; Merker, Marilyn P.; Shundo, Ryushi; Okamoto,  
Yoshiyuki; Roerig, David L.; Linehan, John H.; Dawson, Christopher A.  
CS Dep. Physiol., Med. Coll. Wisconsin, Milwaukee, WI, 53226, USA  
SO American Journal of Physiology (1995), 269(1, Pt. 1), L78-L84  
CODEN: AJPHAP; ISSN: 0002-9513  
PB American Physiological Society  
DT Journal  
LA English  
CC 9-11 (Biochemical Methods)  
Section cross-reference(s): 13  
AB The uptake of methylene blue (MB), and toluidine blue O (TBO) by bovine  
pulmonary arterial endothelial cells grown on microcarrier beads was  
detected as a decrease in the concn. of dye in the medium after these  
thiazine dyes were added to the medium surrounding the cells. Because the  
reduced forms of these dyes are much more lipophilic than the oxidized  
forms, the authors considered the possibility that redn. of the dyes at  
the cell surface might have preceded the uptake by the cells. Therefore,  
the authors studied the ability of the cells to reduce a toluidine blue  
O-polyacrylamide polymer (TBOP), which was too large to enter the cells in  
either the oxidized or reduced form. The TBO moieties of the polymer were

- reduced by the cells, indicating that the dyes did not have to enter the cells to be reduced and that redn. can occur at, or near, the cell surface. The rate of TBOP redn. was about the same as the rate of uptake of the monomeric dyes, indicating that the cell surface redn. mechanism had a sufficient capacity to account for the monomer uptake by the cells. The authors also found that ferricyanide ion, which also did not permeate the cells, was reduced by the cells and that external ferricyanide inhibited the monomeric MB uptake. Thus the results with ferricyanide were also consistent with the concept that the monomeric thiazine dyes are reduced at the cell surface before the more lipophilic reduced forms are taken up by the endothelial cells.
- ST pulmonary artery endothelial cell dye redn; thiazine dye redn endothelium cell culture
- IT Animal tissue culture  
Cell membrane  
Reduction  
(redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT Dyes  
(thiazine; redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT Biological transport  
(absorption, redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT Artery  
(pulmonary, endothelium, redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT 61-73-4, Methylene blue 92-31-9, Toluidine blue O 13408-62-3,  
Ferricyanide  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT 167498-53-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)  
(redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- IT 61-73-4, Methylene blue  
RL: RCT (Reactant); RACT (Reactant or reagent)  
(redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)
- RN 61-73-4 HCAPLUS
- CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)



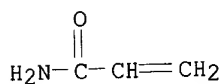
● Cl<sup>-</sup>

- IT 167498-53-5P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation); RACT (Reactant or reagent)

(redn. of thiazine dyes by bovine pulmonary arterial endothelial cells in culture)  
RN 167498-53-5 HCAPLUS  
CN Phenothiazin-5-ium, 7-(dimethylamino)-2-methyl-3-[(2-methyl-1-oxo-2-propenyl)amino]-, chloride, polymer with 2-propenamide (9CI) (CA INDEX NAME)

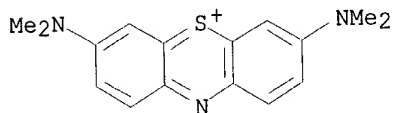
CM 1

CRN 79-06-1  
CMF C3 H5 N O



CM 2

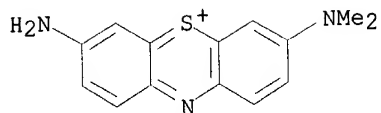
CRN 61-73-4  
CMF C16 H18 N3 S . Cl

● Cl<sup>-</sup>

L85 ANSWER 28 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1995:320946 HCAPLUS  
DN 122:145285  
TI Spectroelectrochemical characterization of ultra-thin films formed by electropolymerization of phenothiazine derivatives on transparent gold electrodes  
AU Schlereth, Daniela D.; Schuhmann, Wolfgang; Schmidt, Hanns-Ludwig  
CS Lehrstuhl fuer Allgemeine Chemie und Biochemie, Technische Universitaet Muenchen, Voettingerstrasse 40, Freising-Weihenstephan, D-85350, Germany  
SO Journal of Electroanalytical Chemistry (1995), 381(1-2), 63-70  
CODEN: JECHES; ISSN: 0368-1874  
PB Elsevier  
DT Journal  
LA English  
CC 72-2 (Electrochemistry)  
Section cross-reference(s): 35, 36  
AB Transparent gold electrodes covered with an ultra-thin polyphenothiazine film layer were obtained by electropolymerization of the monomeric parent compds., Methylene Blue, Methylene Green and Azur A, under alk. pH conditions. The electrochem. behavior of the polymers immobilized on the electrode surface was characterized by UV-visible difference spectroelectrochem. A study of the dependence of the oxidn. state of the surface redox species with the applied potential of any of the different

polymer layers immobilized on the electrode surface showed one rather irreversible redox process, at potentials shifted towards 100-120 mV more pos. values than those obtained for the monomer in soln. The spectroelectrochem. curves, obtained from the absorbance changes obsd. at different applied potentials, showed a hysteresis in the oxidn. process, as well as the loss of some electroactive material from the electrode surface during the redn. process for all polymers studied. For poly-Methylene Blue, a shift of the redox potential towards more neg. values coupled with an increase in the irreversibility of the redox process at increasingly higher pH values was obsd. The simultaneously obtained UV-visible difference spectra of the different films resembled those of the solubilized monomers. However, the spectra of the polymers showed a shift of the main visible max. towards 50-80 nm shorter wavelengths, depending on the monomer studied.

ST electropolymer phenothiazine deriv transparent gold electrode;  
polyphenothiazine redox potential UV visible spectra  
IT Ultraviolet and visible spectra  
(of phenothiazine derivs. and their polymers)  
IT Polymerization  
(electrochem., of phenothiazine derivs. on gold in alk. solns.)  
IT Redox reaction  
(electrochem., of polyphenothiazine derivs.)  
IT Electric potential  
(redox, of polyphenothiazine derivs.)  
IT 7631-99-4, Sodium nitrate, uses 7647-01-0, Hydrochloric acid, uses 7758-11-4, Dipotassium phosphate 10043-35-3, Boric acid h3bo3, uses RL: NUU (Other use, unclassified); PRP (Properties); USES (Uses)  
(electrochem. polymn. of phenothiazine derivs. on gold in soln. contg.)  
IT 143629-25-8P, Poly(Azur A) 150645-86-6P, Poly(methylene blue) 161201-31-6P, Poly(methylene green)  
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(electrochem. prepn. and cyclic voltammetry on gold electrode and UV-visible spectra of)  
IT 7440-57-5, Gold, uses RL: DEV (Device component use); PRP (Properties); USES (Uses)  
(spectroelectrochem. characterization of ultra-thin films formed by electropolymer. of phenothiazine derivs. on transparent gold electrodes)  
IT 61-73-4, Methylene Blue 531-53-3, Azur A 2679-01-8, Methylene Green  
RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
(spectroelectrochem. characterization of ultra-thin films formed by electropolymer. of phenothiazine derivs. on transparent gold electrodes)  
IT 143629-25-8P, Poly(Azur A) 150645-86-6P, Poly(methylene blue) 161201-31-6P, Poly(methylene green)  
RL: PNU (Preparation, unclassified); PRP (Properties); RCT (Reactant); PREP (Preparation); RACT (Reactant or reagent)  
(electrochem. prepn. and cyclic voltammetry on gold electrode and UV-visible spectra of)  
RN 143629-25-8 HCAPLUS  
CN Phenothiazin-5-ium, 3-amino-7-(dimethylamino)-, chloride, homopolymer (9CI) (CA INDEX NAME)  
CM 1  
CRN 531-53-3  
CMF C14 H14 N3 S . Cl

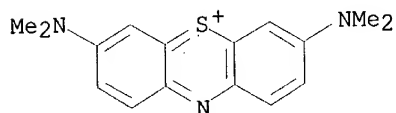


● Cl<sup>-</sup>

RN 150645-86-6 HCAPLUS  
 CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride, homopolymer (9CI)  
 (CA INDEX NAME)

CM 1

CRN 61-73-4  
 CMF C16 H18 N3 S . Cl

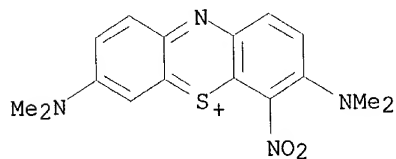


● Cl<sup>-</sup>

RN 161201-31-6 HCAPLUS  
 CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-4-nitro-, chloride, homopolymer  
 (9CI) (CA INDEX NAME)

CM 1

CRN 2679-01-8  
 CMF C16 H17 N4 O2 S . Cl

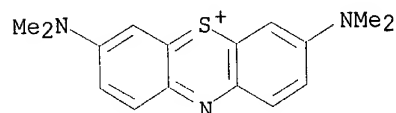


● Cl<sup>-</sup>

IT 61-73-4, Methylene Blue  
 RL: PRP (Properties); RCT (Reactant); RACT (Reactant or reagent)  
 (spectroelectrochem. characterization of ultra-thin films formed by  
 electropolymn. of phenothiazine derivs. on transparent gold electrodes)

RN 61-73-4 HCAPLUS

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

L85 ANSWER 29 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1995:80676 HCAPLUS

DN 122:174077

TI Micrometer patterning of organic materials by selective chemical vapor deposition

AU Sekiguchi, A.; Masuhara, H.

CS ERATO, Res. Dev. Corp. Japan, Kyoto, 606, Japan

SO Microchem. Proc. JRDC-KUL Jt. Int. Symp. (1994), Meeting Date 1993, 147-58. Editor(s): Masuhara, Hiroshi. Publisher: North-Holland, Amsterdam, Neth.

CODEN: 6ONNAC

DT Conference

LA English

CC 74-5 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

AB Micrometer-sized patterns of copper **phthalocyanines** were fabricated from 1,2,4,5-tetracyanobenzene by selective chem. vapor deposition. The deposition was achieved to produce **phthalocyanine** thin films only on copper micropatterns prep'd. on silicon wafers and sapphire plates. By thermal annealing in vacuum, fabricated films were converted to polymer of copper **phthalocyanine**. Chem. vapor deposition of 1,2-dicyanobenzene on copper micropatterns under controlled conditions resulted in directional growth of copper **phthalocyanine** whiskers and debris. By examg. effects of deposition rate and geometrical structure of micropatterns, the deposition mechanism and an important role of micrometer reaction vol. in chem. vapor deposition are discussed.

ST chem vapor deposition micrometer patterning **lithog**; copper **phthalocyanine** micropattern chem vapor deposition; cyanobenzene chem vapor deposition copper micropattern

IT **Lithography**

Vapor deposition processes

(fabrication of micrometer-sized patterns of copper **phthalocyanines** by selective chem. vapor deposition of tetracyanobenzene on copper patterns)

IT 91-15-6, 1,2-Dicyanobenzene 712-74-3, 1,2,4,5-Tetracyanobenzene 7440-50-8, Copper, reactions

RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)

(fabrication of micrometer-sized patterns of copper **phthalocyanines** by selective chem. vapor deposition of tetracyanobenzene on copper patterns)

IT 147-14-8P, Copper **phthalocyanine** 26893-93-6P, Copper

phthalocyanine polymer

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(fabrication of micrometer-sized patterns of copper phthalocyanines by selective chem. vapor deposition of tetracyanobenzene on copper patterns)

IT 26893-93-6P, Copper phthalocyanine polymer

RL: PEP (Physical, engineering or chemical process); SPN (Synthetic preparation); PREP (Preparation); PROC (Process)

(fabrication of micrometer-sized patterns of copper phthalocyanines by selective chem. vapor deposition of tetracyanobenzene on copper patterns)

RN 26893-93-6 HCAPLUS

CN Copper, [29H,31H-phthalocyaninato(2-)-.kappa.N29,.kappa.N30,.kappa.N31,.kappa.N32]-, homopolymer (9CI) (CA INDEX NAME)

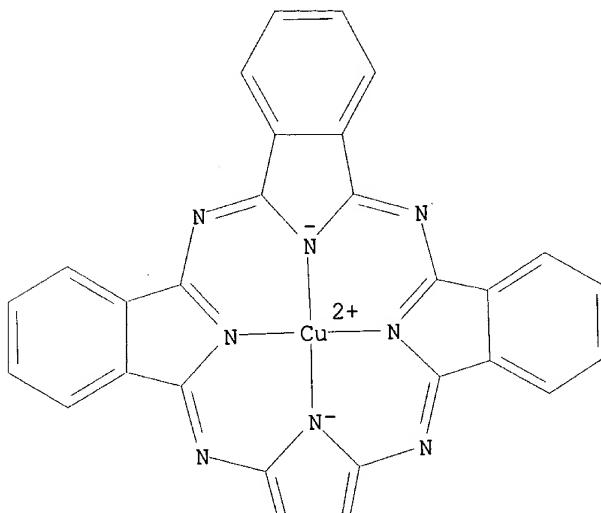
CM 1

CRN 147-14-8

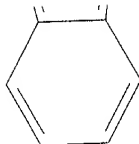
CMF C32 H16 Cu N8

CCI CCS

PAGE 1-A

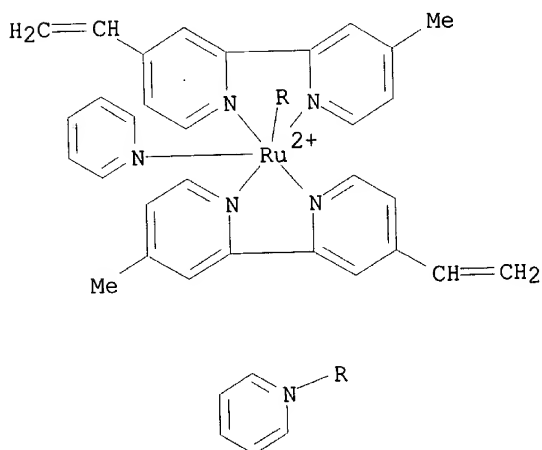






- L85 ANSWER 30 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1995:16786 HCAPLUS  
DN 122:146846  
TI Photosubstitution in thin polymeric films containing Ru(II) polypyridyl complexes  
AU Leasure, Robert M.; Ou, Wei; Moss, John A.; Linton, Richard W.; Meyer, Thomas J.  
CS Dep. Chem., Univ. North Carol. Chapel Hill, Chapel Hill, NC, 27599-3290, USA  
SO Proceedings - Electrochemical Society (1994), 94-2, 222-34  
CODEN: PESODO; ISSN: 0161-6374  
DT Journal  
LA English  
CC 74-1 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)  
AB Thin films of poly[Ru(vbpy)<sub>2</sub>(py)<sub>2</sub>]<sup>2+</sup> (vbpy is 4-vinyl-4'-methyl-2,2'-bipyridine; py is pyridine) have been deposited on electrodes by reductive electropolymerization. Upon photolysis in the presence of chloride ion, ligand loss photochemistry occurs in the films resulting in the sequential formation of poly[Ru(vbpy)<sub>2</sub>(py)Cl]<sup>+</sup> and poly[Ru(vbpy)<sub>2</sub>Cl<sub>2</sub>]. Contact lithography was used to form laterally resolved, bicomponent films with image resolution below 50 μm. Small spot XPS was used to confirm that the photolyzed and non-photolyzed regions of the film were chemically distinct. The redox and spectral properties of the ruthenium-polypyridyl complexes within these films change as chloride ion is photosubstituted for the pyridine ligands. This provides a basis for the fabrication of bicomponent, electrochromic film assemblies.  
ST ruthenium polypyridyl complex polymer photolysis photoimaging; ligand photosubstitution ruthenium polypyridyl complex polymer  
IT Electrochromism  
(based on photosubstitution of pyridine ligand in electropolymerized films of Ru(II) polypyridyl complexes by chloride)  
IT Photolysis  
(of electropolymerized Ru(II) polypyridyl complexes in presence of chloride in solutions and in solid state)  
IT Redox reaction  
(electrochemistry, of bis(pyridine)bis(vinylmethylbipyridine)ruthenium(2+))  
IT Polymerization  
(electrochemistry, reductive, of bis(pyridine)bis(vinylmethylbipyridine)ruthenium(2+))  
IT Optical imaging devices  
(electrochromic, based on photosubstitution of pyridine ligand in electropolymerized films of Ru(II) polypyridyl complexes by chloride)  
IT Lithography  
(photo-, imaging based photosubstitution of pyridine ligand in electropolymerized films of Ru(II) polypyridyl complexes by chloride)  
IT Substitution reaction, coordinative

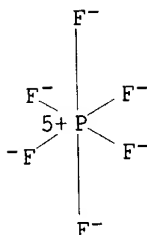
- (photochem., of **pyridine** ligand in electropolymd. films of Ru(II) polypyridyl complexes by chloride)
- IT 161272-31-7P  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (**Synthetic preparation**); TEM (Technical or engineered material use); PREP (**Preparation**); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 (lithog. imaging based on ligand photosubstitution in films of)
- IT 16887-00-6, Chloride, reactions  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); PROC (Process); RACT (Reactant or reagent)  
 (photosubstitution of **pyridine** ligand in electropolymd. films of Ru(II) polypyridyl complexes by)
- IT 153824-72-7, (4-Vinyl-4'-methyl-2,2'-**bipyridine**)bis(**pyridine**)ruthenium(2+)  
 RL: RCT (Reactant); RACT (Reactant or reagent)  
 (reductive electropolymer. of)
- IT 161272-31-7P  
 RL: PEP (Physical, engineering or chemical process); RCT (Reactant); SPN (**Synthetic preparation**); TEM (Technical or engineered material use); PREP (**Preparation**); PROC (Process); RACT (Reactant or reagent); USES (Uses)  
 (lithog. imaging based on ligand photosubstitution in films of)
- RN 161272-31-7 HCAPLUS  
 CN Ruthenium(2+), bis(4-ethenyl-4'-methyl-2,2'-bipyridine- $\kappa$ .N1, $\kappa$ .N1')bis(pyridine)-, bis[hexafluorophosphate(1-)], homopolymer (9CI) (CA INDEX NAME)
- CM 1
- CRN 153824-72-7  
 CMF C36 H34 N6 Ru  
 CCI CCS



CM 2

CRN 16919-18-9

CMF F6 P  
CCI CCS



L85 ANSWER 31 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1994:486261 HCAPLUS

DN 121:86261

TI Azeotrope-like compositions of 1,1-dichloro-1-fluoroethane, C6-alkane, and optionally alkanol and/or nitromethane

IN Swan, Ellen Louise; Logsdon, Peter Brian; Basu, Rajat Subhra

PA Allied-Signal Inc., USA

SO PCT Int. Appl., 37 pp.

CODEN: PIXXD2

DT Patent

LA English

IC ICM C23G005-028

ICS C11D007-50

CC 45-5 (Industrial Organic Chemicals, Leather, Fats, and Waxes)

Section cross-reference(s): 37

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	WO 9309271	A1	19930513	WO 1992-US9623	19921106
	W: AU, BB, BG, BR, CA, CS, FI, HU, JP, KP, KR, LK, MG, MN, MW, NO, PL, RO, RU, SD				
	RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, SE				
	AU 9230696	A1	19930607	AU 1992-30696	19921106
PRAI	US 1991-790743		19911108		
	US 1992-830817		19920205		
	WO 1992-US9623		19921106		
AB	Ozone layer-compatible title compns. contg. C6-alkanes: dimethylbutane, methylpentane and isohexane, are useful in degreasing, cold cleaning, and solvent cleaning, e.g., dry cleaning or <b>printed</b> circuit boards defluxing. For example, a title compn. contg. 1,1-dichloro-1-fluoroethane 98.96 and 2-methylpentane 1.04 wt.% has b.p. 32.16.degree. (760 mm).				
ST	chlorofluoroethane alkane azeotrope; methylpentane dichlorofluoroethane azeotrope; degreasing dichlorofluoroethane azeotrope; ozone layer compatibility dichlorofluoroethane azeotrope				
IT	Blowing agents Solvents (dichlorofluoroethane-alkane mixts., azeotrope-like, ozone layer-compatible)				
IT	Alcohols, uses RL: USES (Uses) (mixts. with dichlorofluoroethane and methylpentane, azeotrope-like, ozone layer-compatible, for cleaning)				
IT	Polyisocyanurates Urethane polymers, preparation				

RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of, blowing agents for, dichloroethane-alkane azeotrope-like mixts. as)

IT Air pollution  
(prevention of ozone layer depletion in, dichlorofluoroethane-alkane azeotrope-like mixts. for)

IT Alkanes, uses  
RL: USES (Uses)  
(C6, mixts. with dichlorofluoroethane, azeotrope-like, ozone layer-compatible, for cleaning)

IT Degreasing  
(agents, dichlorofluoroethane-alkane mixts., azeotrope-like, ozone layer-compatible)

IT Urethane polymers, preparation  
RL: PREP (Preparation)  
(polyester-polyisocyanurate, cellular, prepn. of, blowing agents for, dichloroethane-alkane azeotrope-like mixts. as)

IT Polyisocyanurates  
RL: PREP (Preparation)  
(polyester-polyurethane-, cellular, prepn. of, blowing agents for, dichloroethane-alkane azeotrope-like mixts. as)

IT Polyesters, preparation  
RL: PREP (Preparation)  
(polyisocyanurate-polyurethane-, cellular, prepn. of, blowing agents for, dichloroethane-alkane azeotrope-like mixts. as)

IT Electric circuits  
(printed, boards, cold cleaning and defluxing of, dichlorofluoroethane-alkane azeotrope-like mixts. for)

IT 153657-93-3 153657-94-4 153657-95-5 153657-96-6 153657-97-7  
153657-98-8 153657-99-9  
RL: USES (Uses)  
(azeotrope-like, ozone layer-compatible, for cleaning)

IT 68270-82-6P 153658-66-3P  
RL: PREP (Preparation)  
(cellular, prepn. of, blowing agents for, dichloroethane-alkane azeotropes as)

IT 10028-15-6, Ozone, miscellaneous  
RL: MSC (Miscellaneous)  
(layer, depletion prevention of, dichlorofluoroethane-alkane azeotropes for)

IT 153658-66-3P  
RL: PREP (Preparation)  
(cellular, prepn. of, blowing agents for, dichloroethane-alkane azeotropes as)

RN 153658-66-3 HCAPLUS

CN Isocyanic acid, polymethylenepolyphenylene ester, polymer with 10-[(1-methyl-4-piperidinyl)methyl]-10H-phenothiazine (9CI) (CA INDEX NAME)

CM 1

CRN 9016-87-9

CMF Unspecified

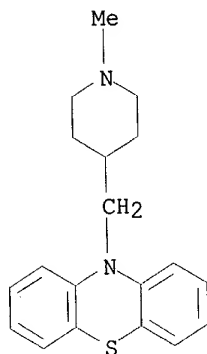
CCI PMS, MAN

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

CM 2

CRN 3772-71-2

CMF C19 H22 N2 S



L85 ANSWER 32 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1993:582947 HCAPLUS  
 DN 119:182947  
 TI Pigment compositions and pigment dispersions  
 IN Ide, Jusaku; Kikuchi, Jiro; Maejima, Masuhiko  
 PA Toyo Ink Mfg Co, Japan  
 SO Jpn. Kokai Tokkyo Koho, 9 pp.  
 CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09B067-46

ICS C09B067-20; C09C003-08; C09C003-10

CC 42-6 (Coatings, Inks, and Related Products)  
 Section cross-reference(s): 41

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 05117541	A2	19930514	JP 1991-305413	19911024
AB	<p>The high-concn. title compns. with good fluidity, useful for coatings and inks, comprise 100 parts pigments and 0.1-30 parts pigment dispersants which are salts of (poly)oxyalkylene alkyl ether sulfosuccinate ester Na salts and pigment derivs. P[X(CH<sub>2</sub>)<sub>k</sub>NR<sub>1</sub>R<sub>2</sub>]<sub>m</sub> [P = residue of .gtoreq.1 org. dye selected from azo, <b>phthalocyanine</b>, quinacridone, anthraquinone, dioxazine, anthrapyrimidine, anthanthrone, indanthrone, flavanthrone, pyranthrone, perylene, perinone, thioindigo, diketopyrrolopyrrole, isoindolinone, insoindoline, and quinophthalone; X = direct bond, divalent group; R<sub>1</sub>-2 = H, (un)substituted alkyl, aryl or R<sub>1</sub>R<sub>2</sub> = (N- or O-contg.) heterocycle; k, m = 1-4]. Dispersions comprising the pigment compns. and vehicles are also claimed. Thus, a pigment compn. was prepd. from 95 parts C.I. Pigment Blue 15:3 and 5 parts salt prepd. from 100 parts CuPcSO<sub>2</sub>NH(CH<sub>2</sub>)<sub>3</sub>NEt<sub>2</sub> (CuPc = residue of Cu <b>phthalocyanine</b>) and 80 parts Me(CH<sub>2</sub>)<sub>10</sub>CO(C<sub>2</sub>H<sub>4</sub>O)<sub>4</sub>COCH(SO<sub>3</sub>Na)CH<sub>2</sub>CO<sub>2</sub>Na. An offset printing ink prepd. from 15 parts of the compn. and 35 parts rosin-modified phenolic resin varnish showed good flowability.</p>				
ST	pigment dispersion coating ink fluidity; dispersant pigment coating ink				
IT	Pigments (for coatings and inks, dispersants for)				
IT	Dispersing agents (for pigments, salts of alkylamino-modified pigments and polyoxyalkylene alkyl ether sulfosuccinates as)				

IT Inks  
(gravure, pigment compns. for, dispersants in)

IT Inks  
(lithog., pigment compns. for, dispersants in)

IT Phenolic resins, compounds  
RL: USES (Uses)  
(rosin-modified, vehicles, in pigment compns. for coatings and inks)

IT 81-77-6, C.I. Pigment Blue 60 147-14-8, C.I. Pigment Blue 15:1  
1047-16-1, C.I. Pigment Violet 19 1328-53-6, C.I. Pigment Green 7  
4051-63-2, C.I. Pigment Red 177 5281-04-9, C.I. Pigment Red 57:1  
5521-31-3, C.I. Pigment Red 179 6358-30-1, C.I. Pigment Violet 23  
6358-85-6, C.I. Pigment Yellow 12 68134-22-5, C.I. Pigment Yellow 154  
84632-65-5, C.I. Pigment Red 254  
RL: USES (Uses)  
(pigment compns., for coatings and inks, with good fluidity,  
dispersants for)

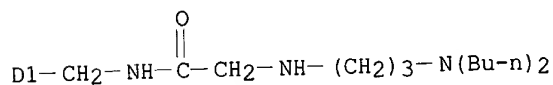
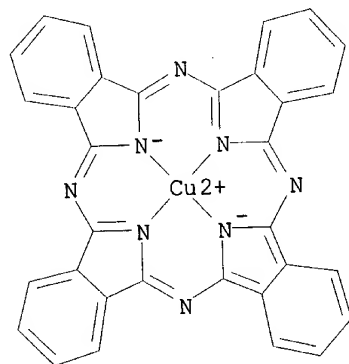
IT 150419-04-8P 150419-07-1P 150431-69-9P **150521-50-9P**  
**150521-51-0P** 150575-58-9P 150575-59-0P 150575-60-3P  
150575-61-4P 150575-62-5P 150575-63-6P **150575-69-2P**  
**150575-70-5P**  
RL: PREP (Preparation)  
(prepn. of, dispersants, for pigments, in coatings and inks)

IT **150521-50-9P 150521-51-0P 150575-69-2P**  
**150575-70-5P**  
RL: PREP (Preparation)  
(prepn. of, dispersants, for pigments, in coatings and inks)

RN 150521-50-9 HCAPLUS  
CN Copper, [2-[[3-(dibutylamino)propyl]amino]-N-(29H,31H-phthalocyanin-C-ylmethyl)acetamidato(2-)-N29,N30,N31,N32]-, compd. with  
.alpha.-(3-carboxy-1-oxosulfopropyl)-.omega.-phenoxy-poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 150463-29-9  
CMF C46 H45 Cu N11 O  
CCI CCS, IDS



CM 2

CRN 150419-06-0

CMF (C2 H4 O)<sub>n</sub> C10 H10 O7 S

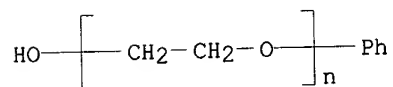
CCI IDS, PMS

CM 3

CRN 9004-78-8

CMF (C2 H4 O)<sub>n</sub> C6 H6 O

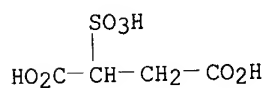
CCI PMS



CM 4

CRN 5138-18-1

CMF C4 H6 O7 S



RN 150521-51-0 HCAPLUS

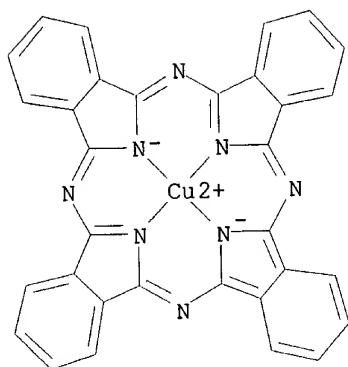
CN Copper, [N,N-dipropyl-29H,31H-phthalocyanine-C-methanaminato(2-)-N29,N30,N31,N32]-, polymer with .alpha.-(3-carboxy-1-oxosulfopropyl)-.omega.-[(1-oxooctadecyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

CRN 150463-30-2

CMF C39 H31 Cu N9

CCI CCS, IDS



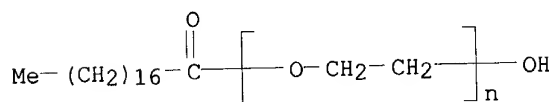
(n-Pr)<sub>2</sub>N-CH<sub>2</sub>-D1

CM 2

CRN 123543-88-4  
CMF (C2 H4 O)<sub>n</sub> C22 H40 O8 S  
CCI IDS, PMS

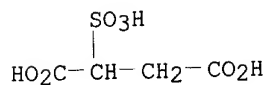
CM 3

CRN 9004-99-3  
CMF (C2 H4 O)<sub>n</sub> C18 H36 O2  
CCI PMS



CM 4

CRN 5138-18-1  
CMF C4 H6 O7 S

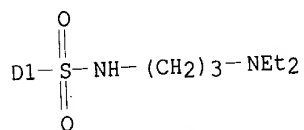
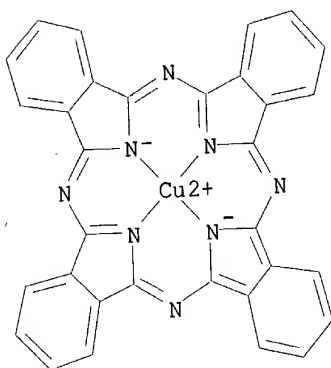


RN 150575-69-2 HCAPLUS  
CN Copper, [N-[3-(diethylamino)propyl]-29H,31H-phthalocyanine-C-sulfonamidato(2-)-N29,N30,N31,N32]-, compd. with .alpha.-(3-carboxy-1-oxosulfopropyl)-.omega.-[(1-oxododecyl)oxylpoly(oxy-1,2-ethanediyl) (9CI)  
(CA INDEX NAME)

CM 1



CRN 93971-95-0  
 CMF C39 H32 Cu N10 O2 S  
 CCI CCS, IDS

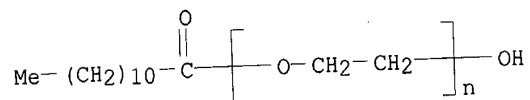


CM 2

CRN 119845-20-4  
 CMF (C2 H4 O)<sub>n</sub> C16 H28 O8 S  
 CCI IDS, PMS

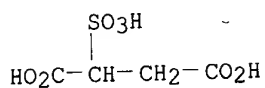
CM 3

CRN 9004-81-3  
 CMF (C2 H4 O)<sub>n</sub> C12 H24 O2  
 CCI PMS



CM 4

CRN 5138-18-1  
 CMF C4 H6 O7 S

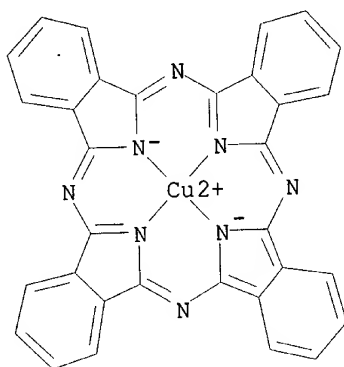


RN 150575-70-5 HCAPLUS  
 CN Copper, [C,C,C,C,C,C,C,C-octachloro-N-[3-(diethylamino)propyl]-29H,31H-phthalocyanine-C-sulfonamidato(2-)-N29,N30,N31,N32]-, compd. with .alpha.-(3-carboxy-1-oxosulfopropyl)-.omega.-[(1-oxododecyl)oxy]poly(oxy-1,2-ethanediyl) (9CI) (CA INDEX NAME)

CM 1

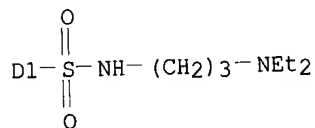
CRN 150463-31-3  
 CMF C39 H24 Cl8 Cu N10 O2 S  
 CCI CCS, IDS

PAGE 1-A



8 ( D1-Cl )

PAGE 2-A



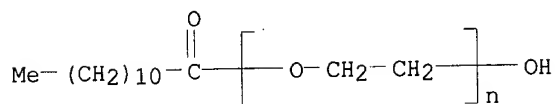
CM 2

CRN 119845-20-4  
 CMF (C2 H4 O)<sub>n</sub> Cl6 H28 O8 S  
 CCI IDS, PMS

CM 3

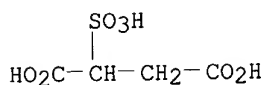
CRN 9004-81-3

CMF (C2 H4 O)<sub>n</sub> C12 H24 O2  
CCI PMS



CM 4

CRN 5138-18-1  
CMF C4 H6 O7 S



L85 ANSWER 33 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1991:91982 HCAPLUS

DN 114:91982

TI Photocurable composition

IN Hamilton, John; Dickinson, Peter

PA Sericol Group Ltd., UK

SO Eur. Pat. Appl., 11 pp.

CODEN: EPXXDW

DT Patent

LA English

IC ICM G03F007-038

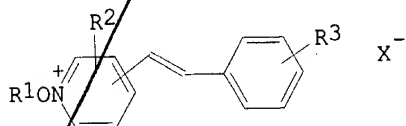
ICS G03F007-033; G03F007-105

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 35

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 373862	A1	19900620	EP 1989-312926	19891211
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	GB 2226564	A1	19900704	GB 1988-29359	19881216
	GB 2226564	B2	19930317		
	US 5061603	A	19911029	US 1989-448966	19891212
	JP 02276806	A2	19901113	JP 1989-324211	19891215
PRAI	GB 1988-29359		19881216		
OS	CASREACT 114:91982				
GI					



AB Photopolymerizable grafted poly(vinyl alc.) prepd. using I [R1 = alkyl, aralkyl, H; R2 = alkyl, amino, cyano, etc.; R3 = Cl, H, a fused ring group; X- = an anion] and a photocurable compn. prepd. therefrom for producing screen printing stencils are claimed. The above compn. shows high sensitivity with low level of photocrosslinkable groups grafted to the poly(vinyl alc.). Thus, N-methoxy-4-(4-formylstyryl) **pyridinium** 4-methylbenzenesulfonate was prepd. and used to graft poly(vinyl alc.). The product was used in a photocurable compn.

ST photopolymerizable compn graft polyvinyl alc; **styrylpyridinium** polyvinyl alc graft

IT **Printing plates**  
(screen, photocurable compns. contg. methoxy(formylstyryl) **pyridinium**-grafted poly(vinyl alc.) for prepn. of)

IT 105521-74-2, Gohsenol GH 20  
RL: USES (Uses)  
(photopolymerizable compn. contg.)

IT 1003-67-4P, 4 **Methylpyridine**-N-oxide 27371-27-3P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction of, for photopolymerizable compn. prepn.)

IT **131854-13-2P**  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. and use of, in photoimaging compn.)

IT 131854-12-1P  
RL: PREP (Preparation)  
(prepn. of and poly(vinyl alc.) grafting with, for photopolymerizable compn.)

IT **131854-13-2P**  
RL: **SPN (Synthetic preparation); PREP (Preparation)**  
(prepn. and use of, in photoimaging compn.)

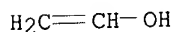
RN 131854-13-2 HCAPLUS

CN Pyridinium, 4-[2-(4-formylphenyl)ethenyl]-1-methoxy-, salt with 4-methylbenzenesulfonic acid (1:1), polymer with ethenol, graft (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

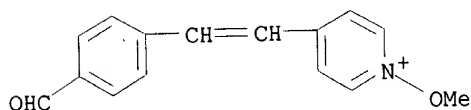


CM 2

CRN 131854-12-1  
CMF C15 H14 N O2 . C7 H7 O3 S

CM 3

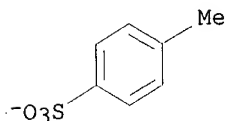
CRN 131854-11-0  
CMF C15 H14 N O2



CM 4

CRN 16722-51-3

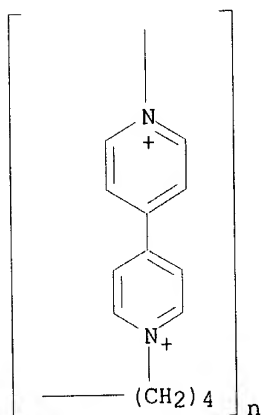
CMF C7 H7 O3 S



L85 ANSWER 34 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
AN 1991:62910 HCAPLUS  
DN 114:62910  
TI Photoreduction of alkyl polyviologens and their low molecular analogs in  
poly(vinyl alcohol) (PVA) matrix  
AU Liang, Z. X.; Li, W.; Chen, Y. L.  
CS Inst. Polym. Sci., Zhongshan Univ., Guangzhou, Peop. Rep. China  
SO J. Macromol. Sci., Chem. (1990), A27(6), 699-709  
CODEN: JMCHBD; ISSN: 0022-233X  
DT Journal  
LA English  
CC 35-8 (Chemistry of Synthetic High Polymers)  
AB The photoredn. behavior of alkyl viologen compds. in a PVA matrix was  
investigated. The initial photoredn. of alkyl viologens and related  
polyviologens followed second-order reaction kinetics, and the resp. rate  
constds., which vary only slightly with alkyl chain length, were detd.  
While the polymer effect was not remarkable in a PVA matrix, the assocn.  
behavior of radical cations was similar to that found in a 2-propanol aq.  
soln.  
ST viologen photoredn polyvinyl alc; kinetics photoredn polyviologen  
IT Ionene polymers  
RL: RCT (Reactant)  
(bipyridine-dibromoalkane, photoredn. of, kinetics of, poly(vinyl alc.)  
matrix effect on)  
IT Kinetics of reduction  
(photochem., of viologens, in poly(vinyl alc.) matrix)  
IT 6198-51-2 32449-18-6 34075-15-5 36437-30-6 37540-89-9  
37541-09-6 47660-20-8 52243-87-5 53721-12-3  
54391-26-3 60723-01-5 63812-59-9 69860-09-9  
69860-10-2 83613-45-0 105009-21-0 105009-22-1  
106725-29-5 106917-09-3 106917-10-6 106917-11-7  
106917-12-8 106917-13-9 106917-14-0 106917-15-1  
RL: RCT (Reactant)  
(photoredn. of, kinetics of, poly(vinyl alc.) matrix effect on)  
IT 9002-89-5, Poly(vinyl alcohol)  
RL: PRP (Properties)  
(viologen photoredn. in matrix of, kinetics of)  
IT 37540-89-9 37541-09-6 53721-12-3  
60723-01-5 63812-59-9 69860-09-9  
69860-10-2 105009-21-0 105009-22-1  
106725-29-5  
RL: RCT (Reactant)  
(photoredn. of, kinetics of, poly(vinyl alc.) matrix effect on)

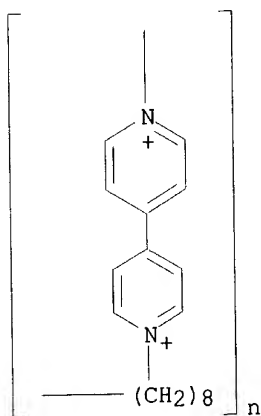
RN 37540-89-9 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,4-butanediyl dibromide) (9CI) (CA INDEX NAME)

● 2 Br<sup>-</sup>

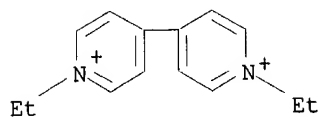
RN 37541-09-6 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,8-octanediyl dibromide) (9CI) (CA INDEX NAME)

● 2 Br<sup>-</sup>

RN 53721-12-3 HCAPLUS

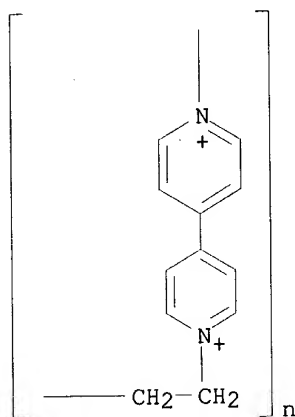
CN 4,4'-Bipyridinium, 1,1'-diethyl-, dibromide (9CI) (CA INDEX NAME)



●2 Br<sup>-</sup>

RN 60723-01-5 HCAPLUS

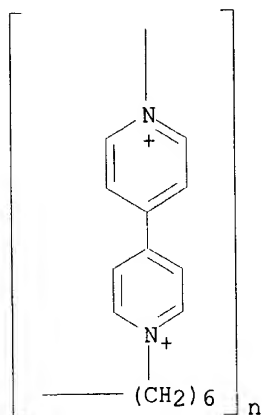
CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,2-ethanediyl dibromide) (9CI) (CA  
INDEX NAME)



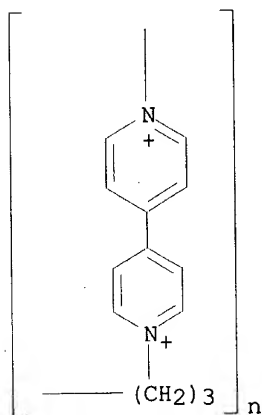
●2 Br<sup>-</sup>

RN 63812-59-9 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,6-hexanediyl dibromide) (9CI) (CA  
INDEX NAME)

● 2 Br<sup>-</sup>

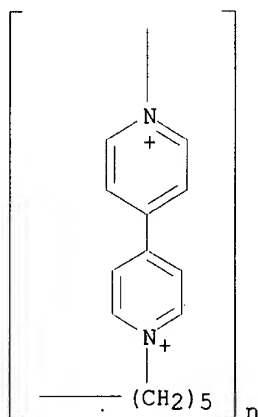
RN 69860-09-9 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,3-propanediyl dibromide) (9CI) (CA  
INDEX NAME)● 2 Br<sup>-</sup>

RN 69860-10-2 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,5-pentanediy dibromide) (9CI) (CA  
INDEX NAME)

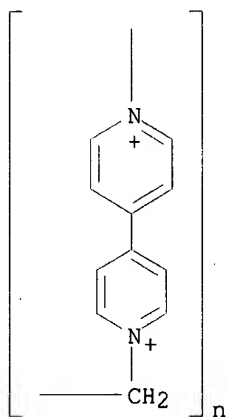




● 2 Br<sup>-</sup>

RN 105009-21-0 HCAPLUS

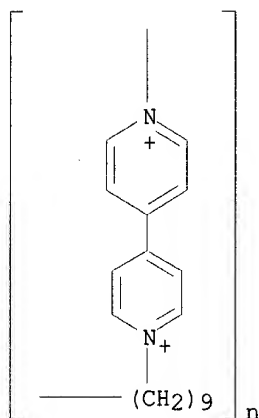
CN Poly([4,4'-bipyridinium]-1,1'-diylmethylene dibromide) (9CI) (CA INDEX NAME)



● 2 Br<sup>-</sup>

RN 105009-22-1 HCAPLUS

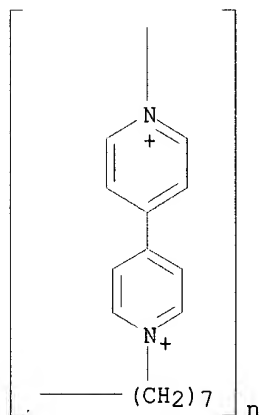
CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,9-nonanediyl dibromide) (9CI) (CA INDEX NAME)



● 2 Br<sup>-</sup>

RN 106725-29-5 HCAPLUS

CN Poly([4,4'-bipyridinium]-1,1'-diyl-1,7-heptanediyl dibromide) (9CI) (CA  
INDEX NAME)



● 2 Br<sup>-</sup>

L85 ANSWER 35 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1989:31418 HCAPLUS

DN 110:31418

TI **Printing plate** with intermediate layer containing  
photosensitive composition

IN Pawlowski, Georg; Lehmann, Peter

PA Hoechst A.-G., Fed. Rep. Ger.

KATHLEEN FULLER EIC 1700/LAW LIBRARY 308-4290

SO Eur. Pat. Appl., 21 pp.

CODEN: EPXXDW

DT Patent

LA German

IC ICM G03F007-02

CC 74-4 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	EP 272550	A2	19880629	EP 1987-118279	19871210
	EP 272550	A3	19890607		
	EP 272550	B1	19920812		
	R: AT, BE, CH, DE, ES, FR, GB, IT, LI, NL, SE				
	DE 3644160	A1	19880714	DE 1986-3644160	19861223
	FI 8705621	A	19880624	FI 1987-5621	19871221
	JP 63172152	A2	19880715	JP 1987-321630	19871221
	ZA 8709597	A	19880727	ZA 1987-9597	19871222
	BR 8707009	A	19880802	BR 1987-7009	19871222
	AU 8783010	A1	19880623	AU 1987-83010	19871223
	AU 604815	B2	19910103		
	US 4956261	A	19900911	US 1989-403007	19890906
PRAI	DE 1986-3644160		19861223		
	US 1987-135311		19871221		

AB A photosensitive material contg. a polycondensation product diazonium salt, a swellable polymer, a photopolymer. initiator, and a polymerizable compd. having .gtoreq.1 unsatd. groups and m.p. .gtoreq.100.degree., comprises an intermediate layer contg. a polycondensation product diazonium salt and H2O-insol., org. solvent-sol., and aq. alkali soln.-sol. swellable binder polymer. Thus, an anodized Al plate was coated with a compn. contg. maleic anhydride-vinyl acetate-vinyl butyral copolymer, 4,4'-bismethoxymethyldiphenyl ether-3-methoxydiphenylamine-4-diazonium sulfate copolymer, H3PO4, colorant, phenylazodiphenylamine, ethyleneglycolmonomethyl ether and solvent. The above layer was coated with a photosensitive layer. The above material could be used to produce 420,000 offset prints without any visible damage.

ST **printing offset plate** intermediate layer; diazonium salt polycondensation product; swellable polymer binder photosensitive compn

IT Vinyl acetal polymers

RL: USES (Uses)

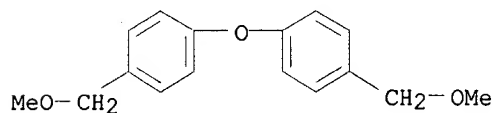
(butyrals, photosensitive compn. contg., for **printing plate**)

IT **Lithographic plates**

(offset, swellable polymer and polymer diazonium salt in intermediate layer for)

IT 78-63-7 85-44-9D, Phthalic anhydride, reaction product with vinyl butyral polymers 108-05-4D, Vinyl acetate, reaction product with vinyl acetal polymers 108-30-5D, Succinic anhydride, reaction product with vinyl butyral polymers 108-31-6D, 2,5-Furandione, reaction product with vinyl acetal polymers 111-36-4D, Butyl isocyanate, reaction product with vinyl butyral polymers 111-46-6, uses and miscellaneous 123-86-4, Butyl acetate 584-84-9 624-83-9D, Methyl isocyanate, reaction product with vinyl butyral polymers 699-98-9D, **Pyridine** -2,3-dicarboxylic acid anhydride, reaction product with vinyl butyral polymers 818-61-1 3524-68-3, Pentaerythritol triacrylate 4221-03-8D, 5-Hydroxypentanal, reaction product with vinyl butyral polymers 4480-83-5D, 1,4-Dioxane-2,6-dione, reaction product with vinyl butyral polymers 4986-89-4, Pentaerythritol tetraacrylate 29570-58-9, Dipentaerythritol hexaacrylate 30674-80-7 71154-39-7 117992-04-8

RL: USES (Uses)  
(photosensitive compn. contg., for printing plate)  
IT 71510-01-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
IT 71510-01-5P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. of)  
RN 71510-01-5 HCAPLUS  
CN Benzenediazonium, 2-methoxy-4-(phenylamino)-, sulfate (2:1), polymer with  
1,1'-oxybis[4-(methoxymethyl)benzene] (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 2509-26-4  
CMF C16 H18 O3

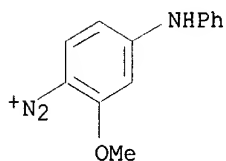


CM 2

CRN 29377-89-7  
CMF C13 H12 N3 O . 1/2 O4 S

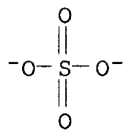
CM 3

CRN 32445-12-8  
CMF C13 H12 N3 O



CM 4

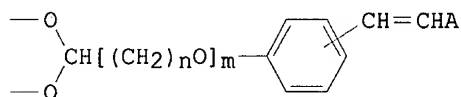
CRN 14808-79-8  
CMF O4 S



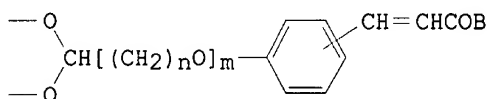
AN 1988:414813 HCAPLUS  
 DN 109:14813  
 TI Photosensitive resin compositions containing photocrosslinkable vinyl alcohol polymers for screen printing  
 IN Oka, Toshio  
 PA Daicel Chemical Industries, Ltd., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM G03C001-68  
 ICS C08F002-48; C08F008-28; C08F299-00; C08K005-28; C08L029-14; G03C001-71  
 CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

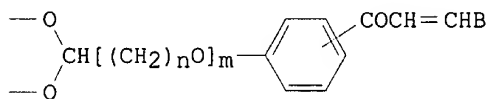
	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 62247354	A2	19871028	JP 1986-87058	19860417
GI					



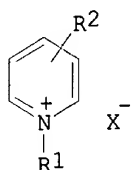
I



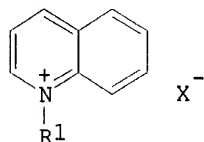
II



III



IV



V

AB The compns. contain (a) film-forming polymer, (b) photocrosslinkable poly(vinyl alc.) having alkylene oxide deriv. groups I, II, and/or III (A = IV, V; B = arom. or heterocyclic group having polar group; R1 = H, alkyl, or aralkyl optionally having OH, CONH2, ether bond, or unsatd. bond; R2 = H, alkyl; X- = anion; m = 0, 1; n = 1-6), and (c) H2O-sol. azide or quinoneazide. The compns. have good shelf-life and provide high resoln. latent images. Thus, an aq. soln. of a photopolymerizable poly(vinyl alc.) 4,4'-diazidostilbene-2,2'-disulfonic acid and a poly(vinyl acetate) emulsion were mixed, coated on a polyester mesh and dried to obtain a 3-.mu. layer. Exposure and development of the layer with H2O gave a pattern with 100-.mu. linewidth resoln.

ST **printing plate** screen photosensitive compn; azide photosensitive compn screen printing; quinonediazide photosensitive compn screen printing; vinyl acetal polymer **printing**

**platemaking**

IT Photoimaging compositions and processes  
(contg. vinyl acetal polymer and azide compd.)

IT Vinyl acetal polymers  
RL: USES (Uses)  
(stilbazolinium and **stilquinolinium** group-contg.,  
photocrosslinkable, for screen **printing plates**)

IT **Printing plates**  
(screen, azide-contg. photosensitive compn. for)

IT 15874-22-3  
RL: USES (Uses)  
(photosensitive layer contg., for screen **printing**  
**platemaking**)

IT 74401-04-0P 78521-12-7P 107845-60-3P  
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP**  
**(Preparation)**  
(prepn. and reaction of, screen **printing plate**  
photosensitive polymer from)

IT 9002-89-5D, stilbazolium or **stilquinolinium** group-contg.  
RL: USES (Uses)  
(screen **printing** photosensitive **plate** using)

IT 107845-60-3P  
RL: RCT (Reactant); **SPN (Synthetic preparation); PREP**  
**(Preparation)**  
(prepn. and reaction of, screen **printing plate**  
photosensitive polymer from)

RN 107845-60-3 HCAPLUS

CN Pyridinium, 4-[2-[4-(2,2-dimethoxyethoxy)phenyl]ethenyl]-1-methyl-, methyl  
sulfate, polymer with ethenol (9CI) (CA INDEX NAME)

CM 1

CRN 557-75-5

CMF C2 H4 O

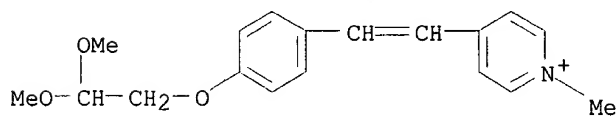
$\text{H}_2\text{C}=\text{CH}-\text{OH}$

CM 2

CRN 74401-18-6  
CMF C18 H22 N O3 . C H3 O4 S

CM 3

CRN 74401-13-1  
CMF C18 H22 N O3



CM 4

CRN 21228-90-0  
CMF C H3 O4 S

Me-O-SO<sub>3</sub><sup>-</sup>

L85 ANSWER 37 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1987:587489 HCAPLUS

DN 107:187489

TI Light-sensitive composition and presensitized lithographic plate

IN Suzuki, Norihito; Goto, Sei; Maeda, Yoshihiro; Shimizu, Shigeki

PA Konishiroku Photo Industry Co., Ltd., Japan; Mitsubishi Chemical Industries Co., Ltd.

SO Jpn. Kokai Tokkyo Koho, 12 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

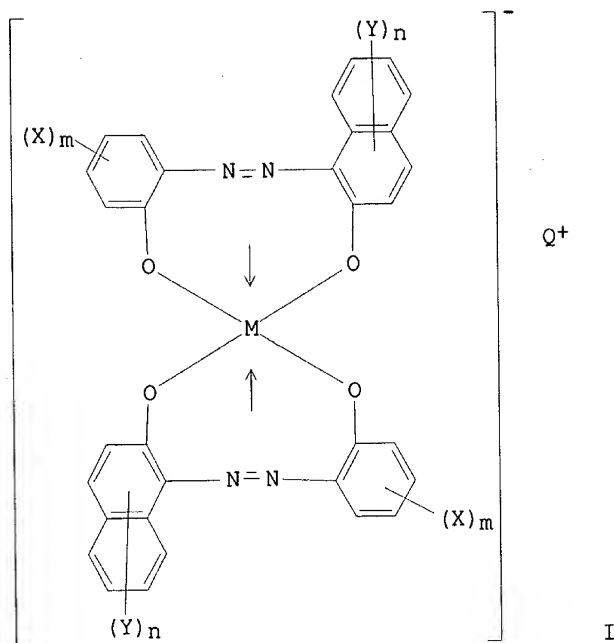
IC ICM G03C001-00

ICS G03C001-00; G03C001-71; G03C005-24; G03F007-02

CC 74-6 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
	-----	----	-----	-----	-----
PI	JP 62111249	A2	19870522	JP 1985-251743	19851109
	JP 06042071	B4	19940601		
	CA 1311071	A1	19921201	CA 1986-522455	19861107
	US 4912013	A	19900327	US 1988-268632	19881108
PRAI	JP 1985-251743		19851109		
	US 1986-926637		19861103		
GI					



- AB The title light-sensitive compn., comprising a light-sensitive diazo resin and lipophilic polymer, contains an org. solvent-sol. metal complex salt dye. A metal in the metal complex salt is selected from Cu, Co, Ni, and Cr. The metal complex salt may be represented by the formula, I [X, Y = H, C1-10 alkyl, C1-4 alkoxy, C2-5 alkoxy carbonyl, C2-5 acyl, aminocarbonyl, C2-5 alkylaminocarbonyl, C1-3 alkylsulfonyl, aminosulfonyl, C2-5 acylamino, nitro, cyano, halo; m = 1-4; n = 1-6; X = Y or X .noteq. Y when X .gtoreq. 2 and Y .gtoreq. 2; Q+ = cation; Q+ is preferably RR'NH<sub>2</sub> (R, R' = C1-20 alkyl, hydroxyalkyl); M = Co, Ni, Cr]. The metal complex salt may be a modified Cu **phthalocyanine** complex. The presensitized **lithog.** plates prepd. by using the above photosensitive compns. are also claimed. The use of the org. solvent-sol. metal complex dyes improves mixing of the dye with photosensitive compn., and also dyes show greater resistance toward leaching out by developers, plate cleaners, or inks.
- ST presensitized plate metal complex dye; **phthalocyanine** copper presensitized **lithog** plate; phenylazonaphthol metal complex presensitized plate
- IT **Lithographic** plates  
(presensitized, light-sensitive compn. contg. diazo resin and hydrophobic polymer and metal complex dye for)
- IT 39290-77-2 110880-69-8 110880-70-1  
RL: USES (Uses)  
(light-sensitive compn. contg., for presensitized **lithog.** plate, with improved fading resistance)
- IT 9070-36-4P 59592-92-6P, Acrylonitrile-2-hydroxyethyl methacrylate-methacrylic acid-methyl methacrylate copolymer 77833-95-5P, Acrylonitrile-ethyl acrylate-N-(4-hydroxyphenyl)methacrylamide-methacrylic acid copolymer 96536-79-7P  
RL: SPN (**Synthetic preparation**); PREP (**Preparation**)  
(prepn. and use of, for presensitized **lithog.** plates)



IT 9070-36-4P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and use of, for presensitized lithog. plates)

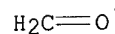
RN 9070-36-4 HCAPLUS

CN Benzenediazonium, 4-(phenylamino)-, sulfate (2:1), polymer with  
formaldehyde (9CI) (CA INDEX NAME)

CM 1

CRN 50-00-0

CMF C H2 O



CM 2

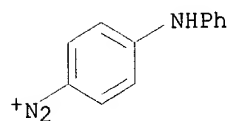
CRN 150-33-4

CMF C12 H10 N3 . 1/2 O4 S

CM 3

CRN 16072-57-4

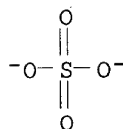
CMF C12 H10 N3



CM 4

CRN 14808-79-8

CMF O4 S



L85 ANSWER 38 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1987:85201 HCAPLUS

DN 106:85201

TI Chemical reduction behavior of alkyl viologens and polyviologens

AU Li, Manfu; Liang, Zhaoxi; Li, Wen

CS Inst. Polym., Zhongshan Univ., Canton, Peop. Rep. China

SO Zhongshan Daxue Xuebao, Ziran Kexueban (1986), (1), 94-9

CODEN: CHTHAJ; ISSN: 0529-6579

DT Journal

LA Chinese

CC 35-8 (Chemistry of Synthetic High Polymers)  
Section cross-reference(s): 27

AB The relationship between structure and chem. redn. behavior of alkyl viologens and polyviologens in the presence of Na<sub>2</sub>S<sub>2</sub>O<sub>4</sub> was studied using electrospectroscopy. The redn. of alkyl viologens was dependent on the alkyl chain length. The behavior of polyviologens was quite different from their resp. alkyl viologens, only the 1st step of redn. could be obsd. The intramol. assocn. of produced polyradical cations occurred even in dil. aq. soln.

ST viologen structure chem redn; polyviologen structure chem redn; structure redn relationship viologen; sodium hdyrosulfite redn viologen

IT Reduction  
(of alkyl viologens and polyviologens, structure in relation to)

IT Chains, chemical  
(structure of, of polyviologens, redn. behavior in relation to)

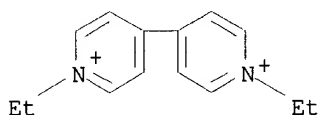
IT 7681-38-1, Sodium hydrosulfate  
RL: RCT (Reactant)  
(redn. by, of alkyl viologens and polyviologens)

IT 3240-78-6 6159-05-3 6198-51-2 32449-18-6 36437-30-6 47660-20-8  
52243-87-5 53721-12-3 54391-26-3 83613-45-0  
106899-75-6 106899-76-7 106899-77-8  
106899-78-9 106899-79-0 106911-71-1  
106911-72-2 106911-73-3 106911-74-4  
106917-08-2 106917-09-3 106917-10-6 106917-11-7 106917-12-8  
106917-13-9 106917-14-0 106917-15-1  
RL: RCT (Reactant)  
(redn. of)

IT 53721-12-3 106899-75-6 106899-76-7  
106899-77-8 106899-78-9 106899-79-0  
106911-71-1 106911-72-2 106911-73-3  
106911-74-4  
RL: RCT (Reactant)  
(redn. of)

RN 53721-12-3 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-diethyl-, dibromide (9CI) (CA INDEX NAME)



● 2 Br<sup>-</sup>

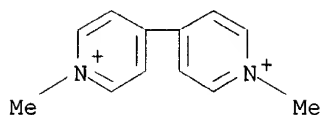
RN 106899-75-6 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dimethyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 3240-78-6

CMF C12 H14 N2 . 2 Br

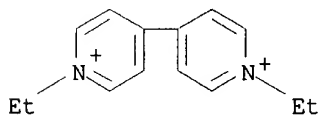


●2 Br<sup>-</sup>

RN 106899-76-7 HCAPLUS  
CN 4,4'-Bipyridinium, 1,1'-diethyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 53721-12-3  
CMF C14 H18 N2 . 2 Br

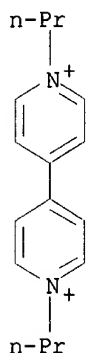


●2 Br<sup>-</sup>

RN 106899-77-8 HCAPLUS  
CN 4,4'-Bipyridinium, 1,1'-dipropyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 52243-87-5  
CMF C16 H22 N2 . 2 Br



●2 Br<sup>-</sup>

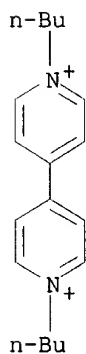
RN 106899-78-9 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dibutyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 32449-18-6

CMF C18 H26 N2 . 2 Br



●2 Br<sup>-</sup>

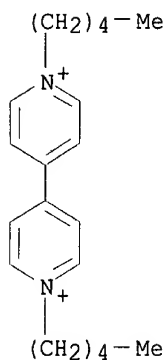
RN 106899-79-0 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dipentyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 54391-26-3

CMF C20 H30 N2 . 2 Br



● 2 Br<sup>-</sup>

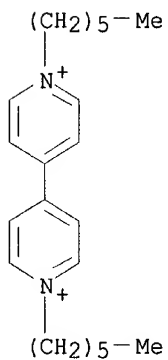
RN 106911-71-1 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dihexyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 6198-51-2

CMF C22 H34 N2 . 2 Br



● 2 Br<sup>-</sup>

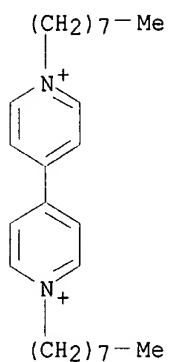
RN 106911-72-2 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dioctyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 36437-30-6

CMF C26 H42 N2 . 2 Br



● 2 Br<sup>-</sup>

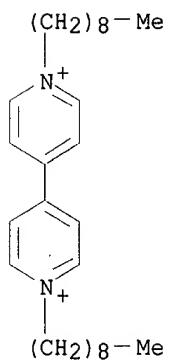
RN 106911-73-3 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-dinonyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 47660-20-8

CMF C<sub>28</sub> H<sub>46</sub> N<sub>2</sub> . 2 Br



● 2 Br<sup>-</sup>

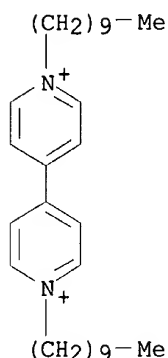
RN 106911-74-4 HCAPLUS

CN 4,4'-Bipyridinium, 1,1'-didecyl-, dibromide, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 34075-15-5

CMF C<sub>30</sub> H<sub>50</sub> N<sub>2</sub> . 2 Br



● 2 Br<sup>-</sup>

L85 ANSWER 39 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1986:139359 HCAPLUS

DN 104:139359

TI Electrochromic display devices

PA Chevron Research Co. , USA

SO. Jpn. Kokai Tokkyo Koho, 16 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC ICM C09K009-00

ICS G02F001-17; G09F009-00

CC 74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)

Section cross-reference(s): 38

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60137985	A2	19850722	JP 1984-243147	19841117
	EP 145337	B1	19900808	EP 1984-307966	19841116

R: DE, FR, GB, IT, NL

PRAI US 1983-554153 19831121

AB The claimed electrochromic display devices contain display electrodes coated with an electrochromic polymer having arom. heterocyclic ring type structural repeating units contg. a Group Va or VIa element and if necessary linkage units obtained from a radically polymerizable monomer. The linkage units should form a conjugated .pi.-electron system with the heterocyclic rings. The display devices also contain an electrolyte soln. in an org. solvent, and a counter electrode. Polymers having quinoline rings, oxazole rings, thiazole rings, phenoxazine rings, etc. are esp. useful.

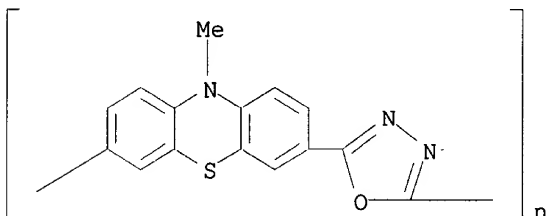
ST electrochromic display heterocycle polymer; quinoline polymer  
electrochromic display

IT Optical **imaging** devices

(electrochromic, heterocyclic polymers for display electrodes of)

IT	25868-25-1	26023-43-8	26023-46-1	26023-47-2	26183-62-0
	26894-31-5	26967-12-4	28576-59-2	32038-01-0	39014-53-4
	51032-49-6	59827-46-2	59827-56-4	60871-72-9	69794-31-6
	76996-74-2	85227-27-6	85227-28-7	85227-29-8	91777-82-1

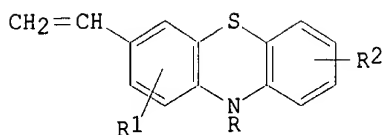
92093-07-7 92093-08-8 96208-50-3 96679-82-2 101150-26-9  
 101150-62-3 101150-63-4 101150-64-5 101150-65-6 101150-66-7  
 101150-67-8 101150-68-9 101150-70-3 101150-79-2 101150-80-5  
 RL: USES (Uses)  
 (electrochromic display devices contg. display electrode coated with)  
 IT 429-42-5  
 RL: USES (Uses)  
 (electrolyte soln. contg., for electrochromic display devices)  
 IT 67-68-5, uses and miscellaneous 68-12-2, uses and miscellaneous  
 75-05-8, uses and miscellaneous 107-12-0 109-74-0 109-99-9, uses and  
 miscellaneous 110-71-4 140-29-4 37248-85-4  
 RL: USES (Uses)  
 (electrolyte solvent, for electrochromic display device with polymer  
 display electrode)  
 IT 70257-87-3P 101150-60-1P 101150-61-2P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 IT 101150-60-1P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (prepn. of)  
 RN 101150-60-1 HCAPLUS  
 CN Poly[(10-methyl-10H-phenothiazine-3,7-diyl)-1,3,4-oxadiazole-2,5-diyl]  
 (9CI) (CA INDEX NAME)



L85 ANSWER 40 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1985:532463 HCAPLUS  
 DN 103:132463  
 TI Electrochromic materials  
 PA Mitsubishi Electric Corp., Japan  
 SO Jpn. Kokai Tokkyo Koho, 8 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC ICM C09K009-00  
 CC 74-9 (Radiation Chemistry, Photochemistry, and Photographic and Other  
 Reprographic Processes)  
 Section cross-reference(s): 73, 76  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 60115681	A2	19850622	JP 1983-225288	19831128
GI	JP 63065239	B4	19881215		

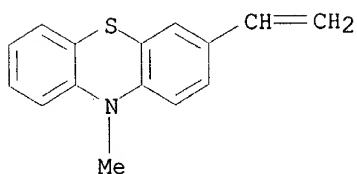




- AB Electrochromic polymers contg. structural repeating units from phenothiazine derivs. I (R = H, alkyl, aryl, acyl; R1, R2 = H, halo, alkyl, alkoxy, NO2, CN, NH2, NMe2, CO2H, SO2NH2, SO3H) are claimed. The electrochromic polymers may be a homopolymer of I or copolymer of I with CH2:CR3R4 (R3 = H, alkyl, halo; R4 = H, alkyl, aryl, halo, CO2H, ester group, CONH2, CN). Thus, an electrochromic display cell was prepd. by using poly(3-vinyl-10-methylphenothiazine) and a LiClO4 soln. (in acetonitrile). The display device showed clear redish-purple display at 0.8 V and showed good memory effect. The 3-vinyl-10-methylphenothiazine was prepd. by methylation of phenothiazine by MeI in the presence of a Na metal-dimethyl sulfoxide reaction product, followed by reaction with N-methylformanilide, and subsequent reaction with [Ph3P+Me]Br- in the presence of n-BuLi.
- ST electrochromic vinylphenothiazine polymer; phenothiazine vinyl polymer electrochromic; display device electrochromic
- IT Electrochromic materials  
(vinylphenothiazine deriv. polymers as)
- IT Optical **imaging** devices  
(electrochromic, contg. vinylphenothiazine deriv. polymers)
- IT 98312-04-0  
RL: PRP (Properties)  
(electrochromic property of)
- IT 35641-59-9  
RL: USES (Uses)  
(electrochromic substance contg. methylvinylphenothiazine polymer and)
- IT 92-84-2  
RL: RCT (Reactant)  
(methylation of)
- IT 1207-72-3P  
RL: SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and formation of)
- IT 52853-38-0P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and formylation of)
- IT 21520-21-8P 98312-05-1P  
RL: RCT (Reactant); PREP (Preparation)  
(prepn. and polymn. of)
- IT 4997-36-8P 98349-79-2P  
RL: RCT (Reactant); SPN (Synthetic preparation); PREP (Preparation)  
(prepn. and reaction of)
- IT **25657-63-0P 85709-38-2P 98312-06-2P**  
RL: **PREP (Preparation)**  
(prepn. of, for electrochromic display devices)
- IT **25657-63-0P 85709-38-2P 98312-06-2P**  
RL: **PREP (Preparation)**  
(prepn. of, for electrochromic display devices)
- RN 25657-63-0 HCAPLUS
- CN 10H-Phenothiazine, 3-ethenyl-10-methyl-, homopolymer (9CI) (CA INDEX NAME)

CM 1

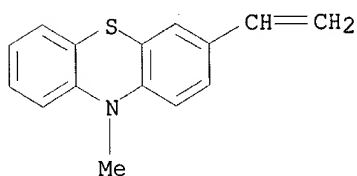
CRN 21520-21-8  
CMF C15 H13 N S



RN 85709-38-2 HCAPLUS  
CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with  
3-ethenyl-10-methyl-10H-phenothiazine (9CI) (CA INDEX NAME)

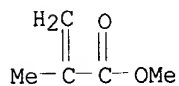
CM 1

CRN 21520-21-8  
CMF C15 H13 N S



CM 2

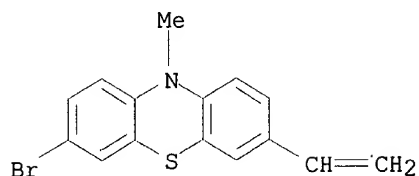
CRN 80-62-6  
CMF C5 H8 O2



RN 98312-06-2 HCAPLUS  
CN 10H-Phenothiazine, 3-bromo-7-ethenyl-10-methyl-, homopolymer (9CI) (CA  
INDEX NAME)

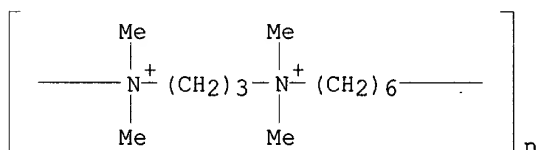
CM 1

CRN 98312-05-1  
CMF C15 H12 Br N S



- L85 ANSWER 41 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1981:570018 HCAPLUS  
 DN 95:170018  
 TI Role of solvation and desolvation in polymer "catalysis". III. Influence of high pressures on the alkaline fading reactions of triphenylmethane dyes catalyzed by macroions  
 AU Maruno, Tohru; Okubo, Tsuneo; Ise, Norio  
 CS Dep. Polymer Chem., Kyoto Univ., Kyoto, Japan  
 SO Ber. Bunsenges. Phys. Chem. (1981), 85(8), 667-71  
 CODEN: BBPCAX; ISSN: 0005-9021  
 DT Journal  
 LA English  
 CC 35-6 (Synthetic High Polymers)  
 Section cross-reference(s): 22, 40, 65  
 AB Alk. fading reactions of ethyl violet [2390-59-2] and crystal violet [548-62-9] were studied in the presence of polyelectrolytes under high pressure, and the significant role of the hydrophobic hydration effect in polyelectrolyte catalysis was demonstrated in terms of the vol. of activation (.DELTA.V.noteq.). Polyelectrolytes used were poly(4-vinylpyridine) quaternized with n-cetyl bromide (5 mol%) and benzyl chloride (95 mol%) (C16BzPVP), 3-6 ionene polymer (Polybrene [28728-55-4]), Na polyethylenesulfonate [25053-27-4], and Na polystyrenesulfonate (I) [25704-18-1]. These four samples, resp., enhanced, slightly retarded, retarded and strongly impeded the reactions. The influence of a cationic surfactant, cetyltrimethylammonium bromide [57-09-0], on the rates and the activation parameters was similar to that of C16BzPVP. These exptl. findings indicate that the hydrophobic macrocations such as C16BzPVP facilitated the formation of the "ice-berg" structure of water around the activated complex so that the complex and the macrocations are incorporated in the ice-berg structure causing a decrease in .DELTA.V.noteq.. On the other hand, the hydrophobic macroanions (e.g. I) enhanced the ice-berg formation around the reactants with resulting increase in .DELTA.V.noteq.. Correspondingly, addn. of C16BzPVP decreased the enthalpy and entropy of activation (.DELTA.H.noteq. and .DELTA.S.noteq.) whereas I increased both .DELTA.H.noteq. and .DELTA.S.noteq.. These results can be reasonably accepted if we assume that the contribution of the electrostatic hydration term is much less important than that from the hydrophobic hydration.  
 ST polyelectrolyte catalysis dye fading; triphenylmethane dye alk fading; pressure alk fading dye; hydration alk fading dye; mechanism polyelectrolyte catalysis dye fading; hydroxylation triphenylmethane dye catalysis; solvation alk fading dye; macroion catalysis dye fading  
 IT Ionene polymers  
 RL: USES (Uses)  
 (alk. fading in presence of, of triphenylmethane dyes under high pressure, kinetics and mechanism of)  
 IT Electrolytes  
 (anionic, alk. fading in presence of, of triphenylmethane dyes under high pressure, kinetics and mechanism of)

- IT Activation volume  
(of alk. fading of triphenylmethane dyes, effect of polyelectrolytes on)
- IT Thermodynamics  
(of alk. fading of triphenylmethane dyes, in presence of polyelectrolytes under high pressure, hydration in relation to)
- IT Hydration, chemical  
(of reactants and activated complexes, in alk. fading of triphenylmethane dyes, effect of polyelectrolytes on)
- IT Kinetics of hydroxylation  
(of triphenylmethane dyes in alk. soln., in presence of polyelectrolytes and high pressure)
- IT Hydroxylation  
(of triphenylmethane dyes, in alk. soln., kinetics and mechanism of polyelectrolyte-catalyzed)
- IT Dyes  
(triphenylmethane, alk. fading of, in presence of polyelectrolytes under high pressure, kinetics and mechanism of)
- IT Fading  
(alk., of triphenylmethane dyes in presence of polyelectrolytes and high pressure, kinetics and mechanism of)
- IT Polyelectrolytes  
(cationic, alk. fading in presence of, of triphenylmethane dyes under high pressure, kinetics and mechanism of)
- IT 57-09-0 100-44-7D, quaternization product with cetyl bromide of poly(4-vinylpyridine) 112-82-3D, quaternization product with benzyl chloride of poly(4-vinylpyridine) 25053-27-4 25232-41-1D, quaternized with benzyl chloride and cetyl bromide 25704-18-1 **28728-55-4**  
RL: USES (Uses)  
(alk. fading in presence of, of triphenylmethane dyes under high pressure, kinetics and mechanism of)
- IT 548-62-9 **2390-59-2**  
RL: RCT (Reactant)  
(alk. fading of, in presence of polyelectrolytes under high pressure, kinetics and mechanism of)
- IT 14280-30-9, properties  
RL: RCT (Reactant)  
(reaction of, with triphenylmethane dyes under high pressure, fading in, kinetics and mechanism of polyelectrolyte-catalyzed)
- IT **28728-55-4**  
RL: USES (Uses)  
(alk. fading in presence of, of triphenylmethane dyes under high pressure, kinetics and mechanism of)
- RN 28728-55-4 HCAPLUS
- CN Poly[(dimethyliminio)-1,3-propanediyl(dimethyliminio)-1,6-hexanediyl dibromide] (9CI) (CA INDEX NAME)



2 Br<sup>-</sup>

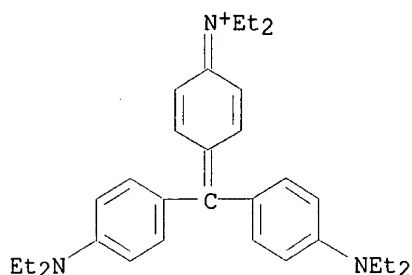
IT 2390-59-2

RL: RCT (Reactant)

(alk. fading of, in presence of polyelectrolytes under high pressure, kinetics and mechanism of)

RN 2390-59-2 HCAPLUS

CN Ethanaminium, N-[4-[bis[4-(diethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-ethyl-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

L85 ANSWER 42 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1980:164689 HCAPLUS

DN 92:164689

TI Photosensitive polymers

IN Yamaguchi, Hiroyoshi; Iwaki, Akio; Kita, Moriyasu; Sasazawa, Tatsuya

PA Konishiroku Photo Industry Co., Ltd., Japan

SO Brit. UK Pat. Appl., 14 pp.

CODEN: BAXXDU

DT Patent

LA English

IC C08F008-30; G03C001-71

CC 36-3 (Plastics Manufacture and Processing)

Section cross-reference(s): 74, 76

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	GB 2018779	A	19791024	GB 1979-12930	19790412
	GB 2018779	B2	19820922		
	JP 54135525	A2	19791020	JP 1978-42940	19780412
	DE 2915154	A1	19791025	DE 1979-2915154	19790412
	US 4442196	A	19840410	US 1980-207087	19801114
PRAI	JP 1978-42940		19780412		
	US 1979-29350		19790411		

AB Photocurable polymeric esters [CH<sub>2</sub>CRR<sub>1</sub>]<sub>n</sub> [R = ZZ1O2CC(CN):CHCH:CHC6H4N3-p; R<sub>1</sub> = H, halogen, or alkyl; Z = divalent org. group; Z1 = optionally substituted phenylene or naphthylene], useful in the prodn. of **printing plates** and **printed circuits**, are manufd. by treating a hydroxy functional polymers with p-azidocinnamylidene-.alpha.-cyanoacetic chloride (I) in the presence of a base. Thus, 20.4 g poly(p-hydroxystyrene) [24979-70-2] in 200 mL dry **pyridine** and 140 mL Me<sub>2</sub>CO at 50.degree. was treated by portionwise addn. of 9.7 g I. The mixt. was maintained 5 h at 50.degree. before

pouring into 2 L iced H<sub>2</sub>O contg. 60 mL concd. HCl to ppt. the esterified polymer (II) [73361-56-5] contg. 25% I-esterified OH groups. II (10 g) was dissolved in 200 mL Et cellosolve and applied to a sand-blasted Al plate by a rotary applicator and dried. The coated plate gave a clear colored image when exposed 3 min 1 m from a 3 kW Hg lamp, with the photosensitivity of the coated plate being better than similar plates coated with poly(vinyl cinnamate), poly(vinyl .alpha.-cyanocinnamate), or poly(vinyl p-azidobenzoate).

ST **printing plate** photoresist polymer; photocuring azido polymer ester; hydroxy polymer azidocinnamylidenecyanoacetic ester; azidocinnamylidenecyanoacetic polymer ester photocuring; resist photocuring azido polyester; elec circuit photoresist polymer

IT **Printing plates**  
(photocurable polymeric azidocinnamylidenecyanoacetic esters for)

IT Resists  
(photo-, polymeric azidocinnamylidenecyanoacetic esters for)

IT Coating materials  
(photocurable, polymeric azidocinnamylidenecyanoacetic esters for)

IT Electric circuits  
(printed, photocurable polymeric azidocinnamylidenecyanoacetic esters for)

IT 920-46-7  
RL: RCT (Reactant)  
(amidation by, of aminonaphthol)

IT 760-93-0  
RL: RCT (Reactant)  
(amidation by, of hydroxyaniline)

IT 591-27-5  
RL: RCT (Reactant)  
(amidation of, by methacrylic anhydride)

IT 83-55-6  
RL: RCT (Reactant)  
(amidation of, by methacryloyl chloride)

IT 24979-70-2P 24979-74-6P 56592-53-1P 57167-08-5P 73310-43-7P 73310-44-8P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
(manuf. and esterification of, by azidocinnamylidenecyanoacetic acid chloride)

IT 73361-52-1P 73361-53-2P 73361-54-3P 73361-55-4P 73361-56-5P 73361-57-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
(manuf. and photochem. crosslinking of)

IT 27931-11-9P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. and polymn. of)

IT 14473-49-5P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. and polymn. of, with Me methacrylate)

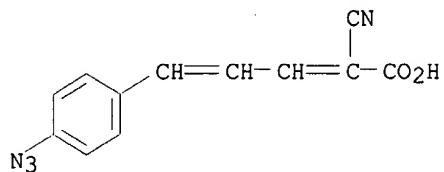
IT 73361-52-1P 73361-53-2P 73361-54-3P 73361-55-4P 73361-56-5P 73361-57-6P  
RL: IMF (Industrial manufacture); RCT (Reactant); PREP (Preparation)  
(manuf. and photochem. crosslinking of)

RN 73361-52-1 HCAPLUS

CN 2-Propenoic acid, 2-methyl-, methyl ester, polymer with N-(3-hydroxyphenyl)-2-methyl-2-propenamide, 5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2  
CMF C12 H8 N4 O2

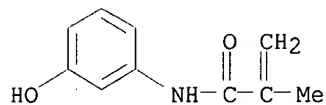


CM 2

CRN 56592-53-1  
CMF (C10 H11 N O2 . C5 H8 O2)x  
CCI PMS

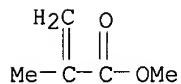
CM 3

CRN 14473-49-5  
CMF C10 H11 N O2



CM 4

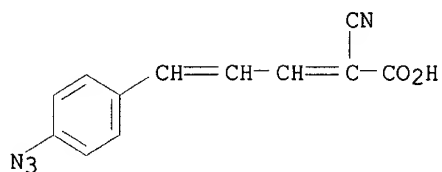
CRN 80-62-6  
CMF C5 H8 O2



RN 73361-53-2 HCAPLUS  
CN 2-Propenamide, N-(4-hydroxyphenyl)-2-methyl-, homopolymer,  
5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2  
CMF C12 H8 N4 O2

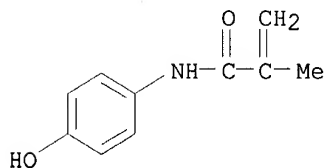


CM 2

CRN 57167-08-5  
 CMF (C10 H11 N O2)x  
 CCI PMS

CM 3

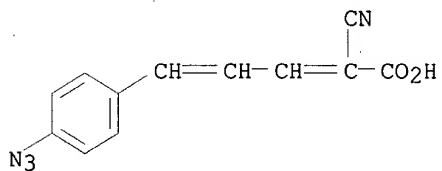
CRN 19243-95-9  
 CMF C10 H11 N O2



RN 73361-54-3 HCAPLUS  
 CN 2-Propenamide, N-(4-hydroxyphenyl)-2-methyl-, polymer with ethenylbenzene,  
 5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2  
 CMF C12 H8 N4 O2



CM 2

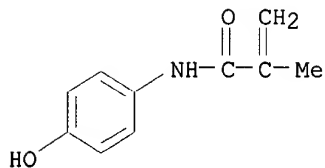
CRN 73310-44-8  
 CMF (C10 H11 N O2 . C8 H8)x  
 CCI PMS

CM 3

CRN 19243-95-9



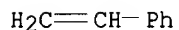
CMF C10 H11 N O2



CM 4

CRN 100-42-5

CMF C8 H8



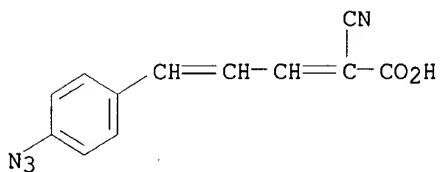
RN 73361-55-4 HCAPLUS

CN 2-Propenamide, N-(5-hydroxy-1-naphthalenyl)-2-methyl-, homopolymer,  
5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (ester) (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2

CMF C12 H8 N4 O2



CM 2

CRN 73310-43-7

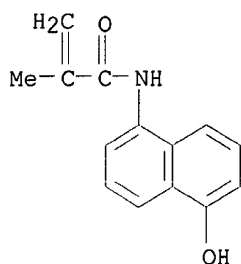
CMF (C14 H13 N O2) x

CCI PMS

CM 3

CRN 27931-11-9

CMF C14 H13 N O2



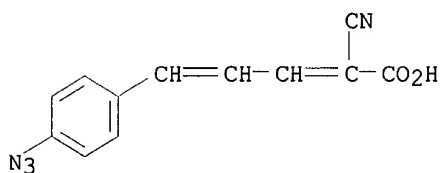
RN 73361-56-5 HCAPLUS

CN Phenol, 4-ethenyl-, homopolymer, 5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2

CMF C12 H8 N4 O2



CM 2

CRN 24979-70-2

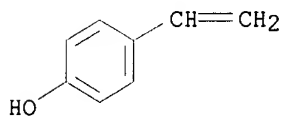
CMF (C8 H8 O)x

CCI PMS

CM 3

CRN 2628-17-3

CMF C8 H8 O



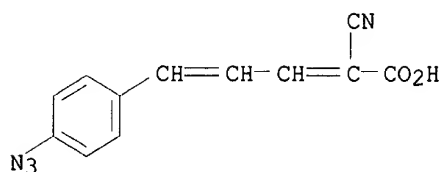
RN 73361-57-6 HCAPLUS

CN Phenol, 4-ethenyl-, polymer with ethenylbenzene, 5-(4-azidophenyl)-2-cyano-2,4-pentadienoate (9CI) (CA INDEX NAME)

CM 1

CRN 42460-58-2

CMF C12 H8 N4 O2



CM 2

CRN 24979-74-6

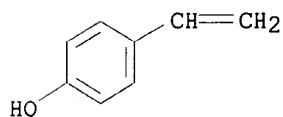
CMF (C8 H8 O . C8 H8)x

CCI PMS

CM 3

CRN 2628-17-3

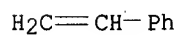
CMF C8 H8 O



CM 4

CRN 100-42-5

CMF C8 H8



L85 ANSWER 43 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1980:119694 HCAPLUS

DN 92:119694

TI Photoconducting polymer material and its use

IN Watarai, Syu; Sawada, Kenichi; Saida, Takashi

PA Fuji Photo Film Co., Ltd., Japan

SO Ger. Offen., 23 pp.

CODEN: GWXXBX

DT Patent

LA German

IC C08G075-00; G03C005-04

CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic Processes)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	DE 2916383	A1	19791108	DE 1979-2916383	19790423
	JP 54141896	A2	19791105	JP 1978-49459	19780426
	GB 2019860	A	19791107	GB 1979-14409	19790425
	GB 2019860	B2	19820428		
	US 4229510	A	19801021	US 1979-33630	19790426

PRAI JP 1978-49459

19780426

AB Polymers superior in photocond. to poly(vinylcarbazole), softening at 30-100.degree., and usable as 0.05-20.mu. particles in 0.5-20% dispersions in an insulating binder in the form of 2-50.mu. electrophotog. layers of high mech. strength or as photoelectrophoretic pigments, are obtained by treating an N-C1-6 alkylphenothiazine with an excess of HCHO in an org. solvent at 40-100.degree. and at a reactant concn. of 5-50% with an acid as catalyst. The polymers contain 2-20 recurring phenothiazine-CH2-units. Thus, N-ethylphenothiazine 20.2, (CH2O)n 3, and H2SO4 0.5 g were stirred in dioxane 150 mL at 90.degree. for 5 h. The reaction product was pptd. in EtOH and repptd. by MeOH from its THF soln. An Al plate was coated with a 10.mu. film of polymer of N-butylphenothiazine prepd. in the above manner (applied as 10% PhMe soln.), charged to +270 V by a 6 kV corona discharge, exposed through a pos. transparency with a 100-W W lamp at 30 cm for 0.5 s, and the latent image developed to a pos. copy by a polystyrene-C toner with 0.5 mm glass beads as carrier.

ST photoconductor polymer electrophotog

IT Photoconductors

Photography, electro-, photoconductors

(alkylphenothiazine-formaldehyde polymers as)

IT 73025-91-9 73025-92-0 73025-94-2

RL: USES (Uses)

(electrophotog. photoconductor, properties of)

IT 73025-95-3P 73025-96-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

IT 73025-95-3P 73025-96-4P

RL: SPN (Synthetic preparation); PREP (Preparation)

(prepn. of)

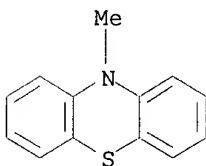
RN 73025-95-3 HCAPLUS

CN Formaldehyde, polymer with 10-methyl-10H-phenothiazine (9CI) (CA INDEX NAME)

CM 1

CRN 1207-72-3

CMF C13 H11 N S



CM 2

CRN 50-00-0

CMF C H2 O

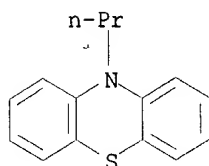
H2C=O

RN 73025-96-4 HCAPLUS

CN Formaldehyde, polymer with 10-propyl-10H-phenothiazine (9CI) (CA INDEX NAME)

CM 1

CRN 15375-48-1  
CMF C15 H15 N S



CM 2

CRN 50-00-0  
CMF C H2 O

H<sub>2</sub>C=O

L85 ANSWER 44 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1979:475084 HCAPLUS

DN 91:75084

TI Glycidyl group-containing dye polymers

IN Shigehara, Kiyotaka; Tsuchida, Eishun

PA Japan

SO Jpn. Kokai Tokkyo Koho, 13 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C08G065-08

CC 35-3 (Synthetic High Polymers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 54048897	A2	19790417	JP 1978-111526	19780911
	JP 60008010	B4	19850228		

AB Coloring materials having glycidyl groups are polymd. to give polymers having coloring groups. Thus, a mixt. of 0.392 g 7-glycidylamino-3-imino-3H-phenothiazine-HCl, 100 mL Me<sub>2</sub>SO, and 1 mL of 10% BF<sub>3</sub> in Et<sub>2</sub>O, was stirred in a sealed tube at 60.degree. for 6 h to give 0.102 g polymer [65544-58-3] having reduced viscosity 0.12 d L/g (30.degree., 0.1 g/17 mL Me<sub>2</sub>SO).

ST glycidyl group dye polymer; glycidylthionine polymer

IT ~~65544-10-7P~~ 65544-12-9P 65544-14-1P  
65544-15-2P 65544-17-4P 65544-18-5P 65544-20-9P  
65544-22-1P 65544-23-2P 65544-25-4P 65544-51-6P  
65544-53-8P 65544-54-9P 65544-56-1P  
65544-57-2P 65544-58-3P 65587-55-5P  
71092-19-8P 71092-20-1P

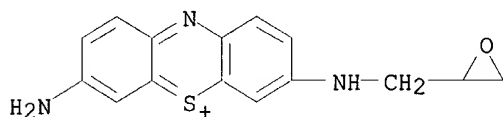
RL: PREP (Preparation)

(prepn. of colored)

IT 61-73-4 81-88-9 135-59-1 482-89-3 548-62-9  
573-58-0

NO  
Tendency of  
ol. support  
(Just  
polymer)

RL: RCT (Reactant)  
(reaction of, with epichlorohydrin)  
IT 106-89-8, reactions  
RL: RCT (Reactant)  
(reaction of, with iminophenothiazinamine derivs.)  
IT 65544-10-7P 65544-12-9P 65544-14-1P  
65544-15-2P 65544-20-9P 65544-22-1P  
65544-23-2P 65544-53-8P 65544-54-9P  
65544-56-1P 65544-57-2P 65544-58-3P  
71092-19-8P 71092-20-1P  
RL: PREP (Preparation)  
(prepn. of colored)  
RN 65544-10-7 HCAPLUS  
CN Phenothiazin-5-ium, 3-amino-7-[(oxiranylmethyl)amino]-, chloride,  
dihydrochloride, polymer with methyloxirane (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 65544-09-4  
CMF C15 H14 N3 O S . 2 Cl H . Cl

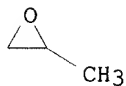


● Cl<sup>-</sup>

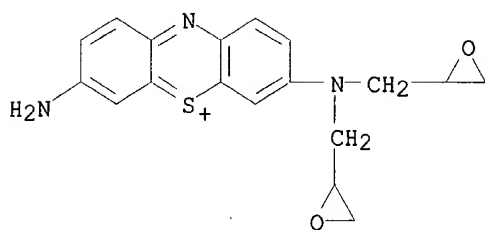
● 2 HCl

CM 2

CRN 75-56-9  
CMF C3 H6 O



RN 65544-12-9 HCAPLUS  
CN Phenothiazin-5-ium, 3-amino-7-[bis(oxiranylmethyl)amino]-, chloride,  
dihydrochloride, polymer with methyloxirane (9CI) (CA INDEX NAME)  
  
CM 1  
  
CRN 65544-11-8  
CMF C18 H18 N3 O2 S . 2 Cl H . Cl

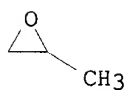
● Cl<sup>-</sup>

● 2 HCl

CM 2

CRN 75-56-9

CMF C3 H6 O



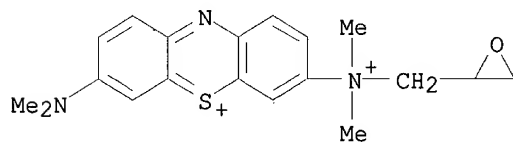
RN 65544-14-1 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[dimethyl(oxiranylmethyl)ammonio]-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-13-0

CMF C19 H23 N3 O S . 2 Cl

● 2 Cl<sup>-</sup>

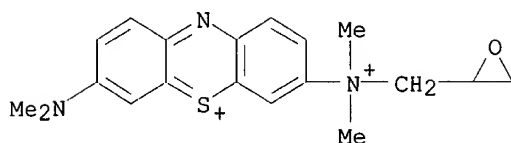
RN 65544-15-2 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[dimethyl(oxiranylmethyl)ammonio]-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

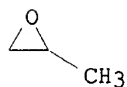
CM 1

Page 164

CMF C19 H23 N3 O S . 2 Cl

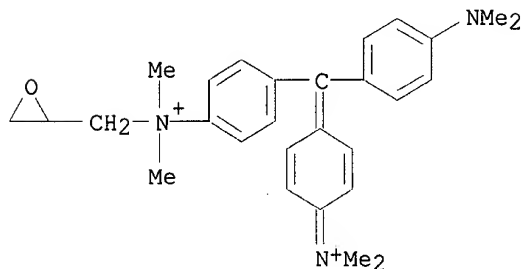
 $\bullet 2 \text{ Cl}^-$ 

CMF C3 H6 O



Oxiranemethanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(dimethyliminio)-  
 2,5-cyclohexadien-1-ylidene]methyl]phenyl]-N,N-dimethyl-, dichloride,  
 polymer with methyloxirane (9CI) (CA INDEX NAME)

CMF C28 H35 N3 O . 2 C1

 $\bullet 2 \text{ Cl}^-$ 

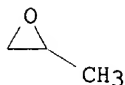
CRN 75-56-9



LEE 09/828075

Page 165

CMF C3 H6 O



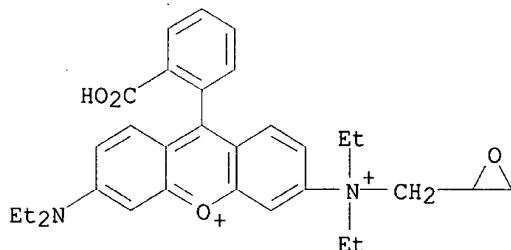
RN 65544-22-1 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0

CMF C31 H36 N2 O4 . 2 Cl



● 2 Cl<sup>-</sup>

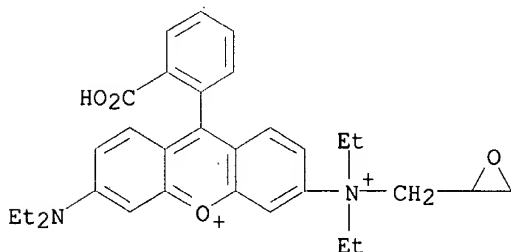
RN 65544-23-2 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylium-3-yl]-N,N-diethyl-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0

CMF C31 H36 N2 O4 . 2 Cl

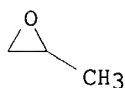


2 Cl<sup>-</sup>

CM 2

CRN 75-56-9

CMF C3 H6 O



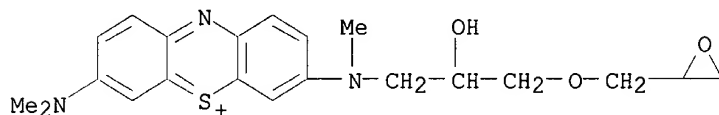
RN 65544-53-8 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-(oxiranylmethoxy)propyl]methylamino]-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-52-7

CMF C21 H26 N3 O3 S . Cl

● Cl<sup>-</sup>

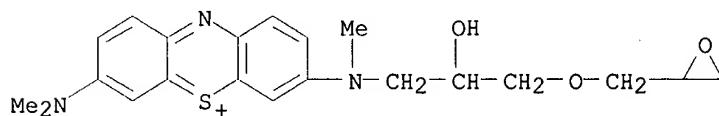
RN 65544-54-9 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-(oxiranylmethoxy)propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

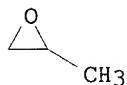
CRN 65544-52-7

CMF C21 H26 N3 O3 S . Cl

● Cl<sup>-</sup>

CM 2

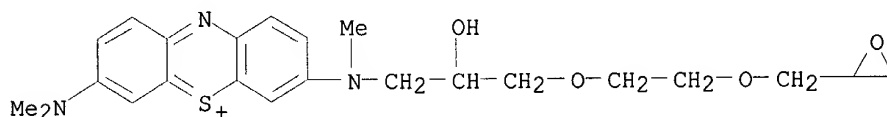
CRN 75-56-9  
CMF C3 H6 O



RN 65544-56-1 HCAPLUS  
CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[2-(oxiranylmethoxy)ethoxy]propyl]methylamino]-, chloride, homopolymer (9CI)  
(CA INDEX NAME)

CM 1

CRN 65544-55-0  
CMF C23 H30 N3 O4 S . Cl

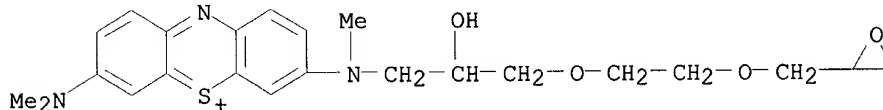


● Cl<sup>-</sup>

RN 65544-57-2 HCAPLUS  
CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[2-(oxiranylmethoxy)ethoxy]propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

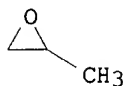
CRN 65544-55-0  
CMF C23 H30 N3 O4 S . Cl



● Cl<sup>-</sup>

CM 2

CRN 75-56-9  
CMF C3 H6 O



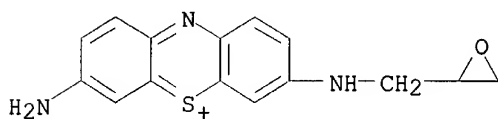
RN 65544-58-3 HCAPLUS

CN Phenothiazin-5-ium, 3-amino-7-[(oxiranylmethyl)amino]-, chloride, dihydrochloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-09-4

CMF C15 H14 N3 O S . 2 Cl H . Cl

● Cl<sup>-</sup>

● 2 HCl

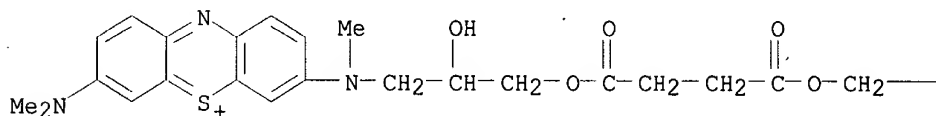
RN 71092-19-8 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[4-(oxiranylmethoxy)-1,4-dioxobutoxy]propyl]methylamino]-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65620-28-2

CMF C25 H30 N3 O6 S . Cl



PAGE 1-A

● Cl<sup>-</sup>

PAGE 1-B



RN 71092-20-1 HCAPLUS

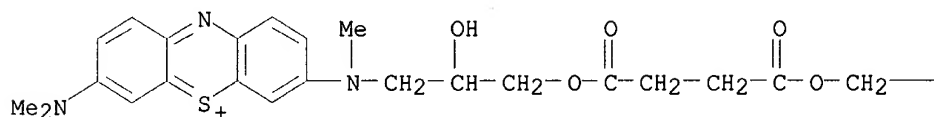
CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[4-(oxiranylmethoxy)-1,4-dioxobutoxy]propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65620-28-2

CMF C25 H30 N3 O6 S . Cl

PAGE 1-A



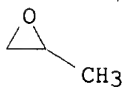
PAGE 1-B



CM 2

CRN 75-56-9

CMF C3 H6 O



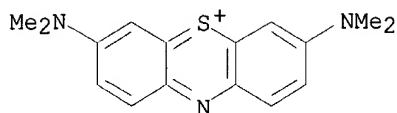
IT 61-73-4 548-62-9

RL: RCT (Reactant)

(reaction of, with epichlorohydrin)

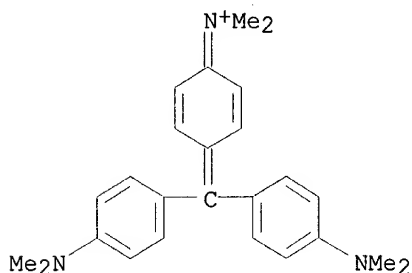
RN 61-73-4 HCAPLUS

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

RN 548-62-9 HCAPLUS

CN Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

L85 ANSWER 45 OF 46 HCAPLUS COPYRIGHT 2002 ACS

AN 1978:426022 HCAPLUS

DN 89:26022

TI Glycidyl group-containing monomeric and polymeric dyes

IN Shigehara, Kiyotaka; Tsuchida, Hidetoshi

PA Japan

SO Japan. Kokai, 15 pp.

CODEN: JKXXAF

DT Patent

LA Japanese

IC C09B057-00

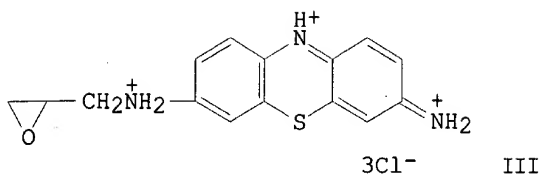
CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)

FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52121038	A2	19771012	JP 1976-36986	19760403
	JP 60018701	B4	19850511		

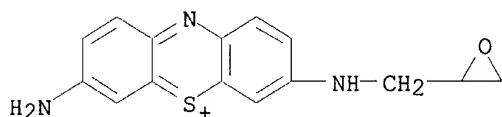
GI

Just  
polymer  
of  
N-teacy  
AL  
support



- AB Amino group-contg. dyes were treated with epichlorohydrin (I) [106-89-8] or other glycidyl compds., and the resulting glycidyl group-contg. dyes were homopolymd. or copolymd. with propylene oxide. For example, I and thionine (II) [581-64-6] in DMF were heated at 40.degree. for 5 h in the dark and treated with HCl to give 47.3% violet black III [65544-09-4] which was homopolymd. in the presence of BF<sub>3</sub>.Et<sub>2</sub>O to give polymer with better lightfastness than II.
- ST glycidyl dye polymer
- IT Epoxy group  
(dyes contg.)
- IT Quaternary ammonium compounds, uses and miscellaneous  
RL: MSC (Miscellaneous)  
(dyes, mono- and polymeric)
- IT Crosslinking agents  
(for polymeric dyes)
- IT Polymerization  
(of glycidyl group-contg. dyes, in the presence of boron trifluoride etherate)
- IT Dyes  
(mono- and polymeric, glycidyl derivs.)
- IT 108-77-0 111-50-2 629-03-8 7710-20-5 36182-48-6  
RL: USES (Uses)  
(crosslinking agents for reaction products from polyethylenimine and glycidyl group-contg. dyes)
- IT 65544-09-4P 65544-11-8P 65544-13-0P 65544-16-3P 65544-18-5P  
65544-21-0P 65544-24-3P 65544-52-7P 65544-55-0P 65620-28-2P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(manuf. and polymn. of)
- IT 9002-98-6DP, reaction products with glycidyl group-contg. dyes  
65544-10-7P 65544-12-9P 65544-14-1P  
65544-15-2P 65544-17-4P 65544-19-6P  
65544-20-9P 65544-22-1P 65544-23-2P  
65544-25-4P 65544-51-6P 65544-53-8P 65544-54-9P  
65544-56-1P 65544-57-2P 65544-58-3P  
65587-55-5P 65684-17-5P 65684-18-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of)
- IT 2224-15-9  
RL: RCT (Reactant)  
(reaction of, with Azure B)
- IT 2238-07-5 21739-14-0  
RL: RCT (Reactant)  
(reaction of, with Azure B)
- IT 106-89-8, reactions  
RL: RCT (Reactant)  
(reaction of, with dyes)
- IT 61-73-4 81-88-9 482-89-3 548-62-9 573-58-0  
581-64-6  
RL: RCT (Reactant)

(reaction of, with epichlorohydrin)  
IT 531-55-5  
RL: RCT (Reactant)  
(reaction of, with glycidyl compds.)  
IT 65544-10-7P 65544-12-9P 65544-14-1P  
65544-15-2P 65544-19-6P 65544-20-9P  
65544-22-1P 65544-23-2P 65544-53-8P  
65544-54-9P 65544-56-1P 65544-57-2P  
65544-58-3P 65684-17-5P 65684-18-6P  
RL: IMF (Industrial manufacture); PREP (Preparation)  
(prepn. of)  
RN 65544-10-7 HCAPLUS  
CN Phenothiazin-5-ium, 3-amino-7-[(oxiranylmethyl)amino]-, chloride,  
dihydrochloride, polymer with methyloxirane (9CI) (CA INDEX NAME)  
CM 1  
CRN 65544-09-4  
CMF C15 H14 N3 O S . 2 Cl H . Cl

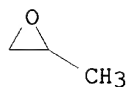


● Cl<sup>-</sup>

● 2 HCl

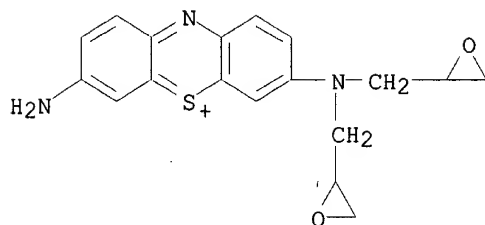
CM 2

CRN 75-56-9  
CMF C3 H6 O



RN 65544-12-9 HCAPLUS  
CN Phenothiazin-5-ium, 3-amino-7-[bis(oxiranylmethyl)amino]-, chloride,  
dihydrochloride, polymer with methyloxirane (9CI) (CA INDEX NAME)  
CM 1  
CRN 65544-11-8  
CMF C18 H18 N3 O2 S . 2 Cl H . Cl



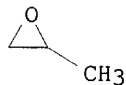
● Cl<sup>-</sup>

●2 HCl

CM 2

CRN 75-56-9

CMF C3 H6 O



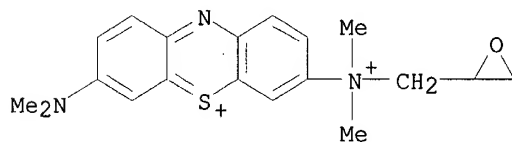
RN 65544-14-1 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[dimethyl(oxiranylmethyl)ammonio]-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-13-0

CMF C19 H23 N3 O S . 2 Cl

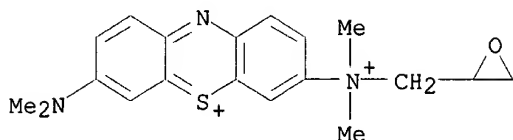
●2 Cl<sup>-</sup>

RN 65544-15-2 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[dimethyl(oxiranylmethyl)ammonio]-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

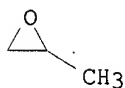
CRN 65544-13-0  
CMF C19 H23 N3 O S . 2 Cl



● 2 Cl<sup>-</sup>

CM 2

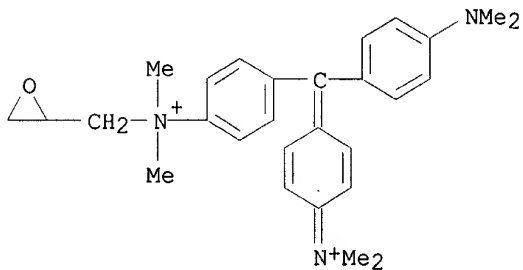
CRN 75-56-9  
CMF C3 H6 O



RN 65544-19-6 HCAPLUS  
CN Oxiranemethanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(dimethyliminio)-2,5-cyclohexadien-1-ylidene]methyl]phenyl]-N,N-dimethyl-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-18-5  
CMF C28 H35 N3 O . 2 Cl



● 2 Cl<sup>-</sup>

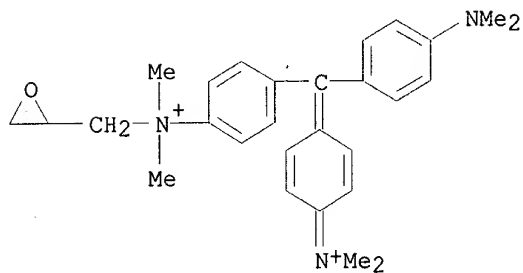
RN 65544-20-9 HCAPLUS  
CN Oxiranemethanaminium, N-[4-[[4-(dimethylamino)phenyl][4-(dimethyliminio)-2,5-cyclohexadien-1-ylidene]methyl]phenyl]-N,N-dimethyl-, dichloride,

polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65544-18-5

CMF C28 H35 N3 O . 2 Cl

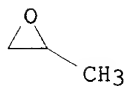


● 2 Cl<sup>-</sup>

CM 2

CRN 75-56-9

CMF C3 H6 O



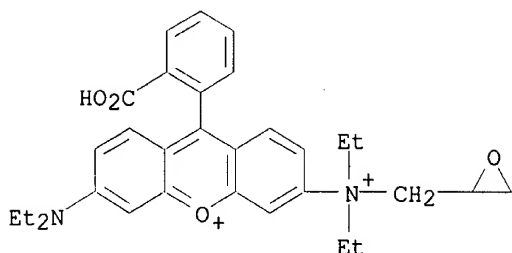
RN 65544-22-1 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylum-3-yl]-N,N-diethyl-, dichloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0

CMF C31 H36 N2 O4 . 2 Cl

● 2 Cl<sup>-</sup>

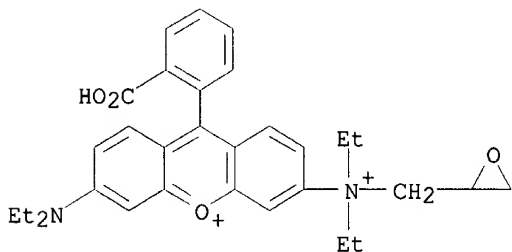
RN 65544-23-2 HCAPLUS

CN Oxiranemethanaminium, N-[9-(2-carboxyphenyl)-6-(diethylamino)xanthylum-3-yl]-N,N-diethyl-, dichloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65544-21-0

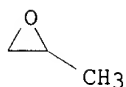
CMF C31 H36 N2 O4 . 2 Cl

● 2 Cl<sup>-</sup>

CM 2

CRN 75-56-9

CMF C3 H6 O



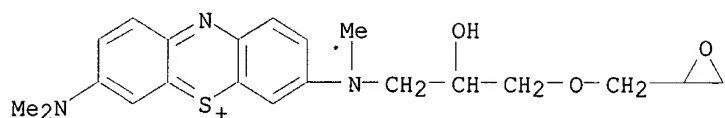
RN 65544-53-8 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-(oxiranylmethoxy)propyl]methylamino]-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-52-7

CMF C21 H26 N3 O3 S . Cl

● Cl<sup>-</sup>

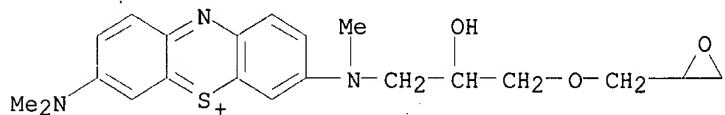
RN 65544-54-9 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-(oxiranylmethoxy)propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65544-52-7

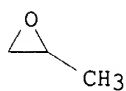
CMF C21 H26 N3 O3 S . Cl

● Cl<sup>-</sup>

CM 2

CRN 75-56-9

CMF C3 H6 O



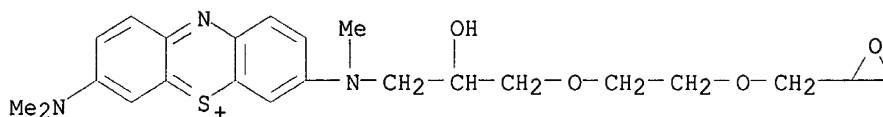
RN 65544-56-1 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[2-(oxiranylmethoxy)ethoxy]propyl]methylamino]-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-55-0

CMF C23 H30 N3 O4 S . Cl

● Cl<sup>-</sup>

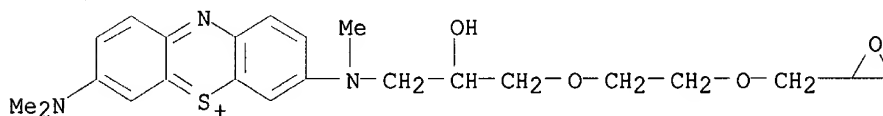
RN 65544-57-2 HCAPLUS

CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[[2-(oxiranylmethoxy)ethoxy]propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65544-55-0

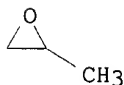
CMF C23 H30 N3 O4 S . Cl

● Cl<sup>-</sup>

CM 2

CRN 75-56-9

CMF C3 H6 O



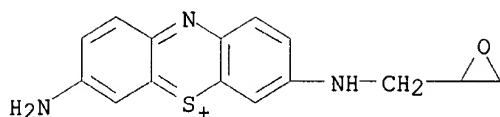
RN 65544-58-3 HCAPLUS

CN Phenothiazin-5-ium, 3-amino-7-[(oxiranylmethyl)amino]-, chloride, dihydrochloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65544-09-4

CMF C15 H14 N3 O S . 2 Cl H . Cl

● Cl<sup>-</sup>

● 2 HCl

RN 65684-17-5 HCAPLUS

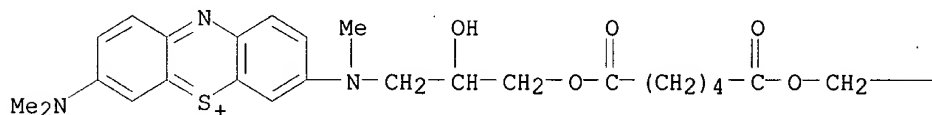
CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[[6-(oxiranylmethoxy)-1,6-dioxohexyl]oxy]propyl]methylamino]-, chloride, homopolymer (9CI) (CA INDEX NAME)

CM 1

CRN 65684-16-4

CMF C27 H34 N3 O6 S . Cl

PAGE 1-A

● Cl<sup>-</sup>

PAGE 1-B



RN 65684-18-6 HCAPLUS

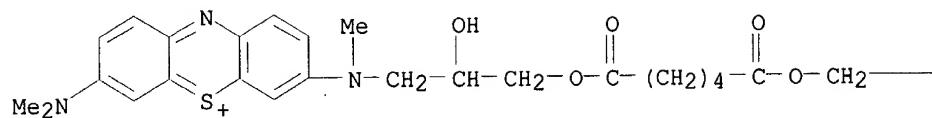
CN Phenothiazin-5-ium, 3-(dimethylamino)-7-[[2-hydroxy-3-[[6-(oxiranylmethoxy)-1,6-dioxohexyl]oxy]propyl]methylamino]-, chloride, polymer with methyloxirane (9CI) (CA INDEX NAME)

CM 1

CRN 65684-16-4

CMF C27 H34 N3 O6 S . Cl

PAGE 1-A

● Cl<sup>-</sup>

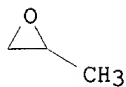
PAGE 1-B



CM 2

CRN 75-56-9

CMF C3 H6 O



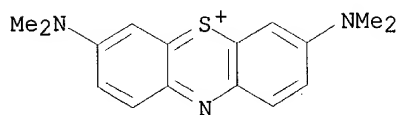
IT 61-73-4 548-62-9

RL: RCT (Reactant)

(reaction of, with epichlorohydrin)

RN 61-73-4 HCAPLUS

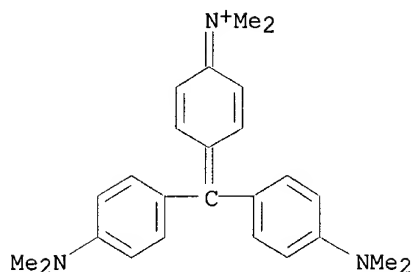
CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>

RN 548-62-9 HCAPLUS

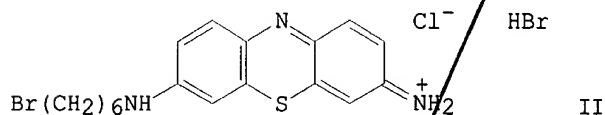
CN Methanaminium, N-[4-[bis[4-(dimethylamino)phenyl]methylene]-2,5-cyclohexadien-1-ylidene]-N-methyl-, chloride (9CI) (CA INDEX NAME)



● Cl<sup>-</sup>

L85 ANSWER 46 OF 46 HCAPLUS COPYRIGHT 2002 ACS  
 AN 1978:91046 HCAPLUS  
 DN 88:91046  
 TI Active halogen-containing dye derivatives  
 IN Shigehara, Kiyotaka; Tsuchida, Hidetoshi  
 PA Japan  
 SO Japan. Kokai, 14 pp.  
 CODEN: JKXXAF  
 DT Patent  
 LA Japanese  
 IC C09B057-00  
 CC 40-6 (Dyes, Fluorescent Whitening Agents, and Photosensitizers)  
 FAN.CNT 1

	PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
PI	JP 52121037	A2	19771012	JP 1976-36985	19760402
GI	JP 55033776	B4	19800902		



AB Amino group-contg. dyes were treated with 1,6-dibromohexane (I) [629-03-8] or adipoyl chloride [111-50-2], and the resulting compds. contg. active halogen were treated with amino-group contg. polymers to give polymeric dyes. For example, thionine [581-64-6] in DMF was treated with I to give 19.6% violet black II [65544-48-1] which was treated with poly(4-vinylpyridine) to give bluish violet polymeric dye [65544-50-5].  
 ST active halogen dye polymer; polymeric dye  
 IT Crosslinking agents  
 (dibromohexane, for polymeric dyes)  
 IT Quaternary ammonium compounds, uses and miscellaneous  
 RL: MSC (Miscellaneous)  
 (dyes)  
 IT Dyes

(mono- and polymeric, active halogen-contg.)

IT 9002-98-6DP, reaction products with active halogen-contg. dyes  
26809-43-8DP, hydrolyzed, reaction products with active halogen-contg.  
dyes 65544-45-8P **65544-47-0P** 65544-48-1DP, reaction products  
with polyethylenimine and hydrolyzed poly(vinylphthalimide) 65544-48-1P  
**65544-50-5P** 65561-98-0DP, reaction products with  
polyethylenimine 65561-98-0P 65561-99-1P 65562-00-7DP, reaction  
products with polyethylenimine and hydrolyzed poly(vinylphthalimide)  
65562-00-7P 65562-01-8DP, reaction products with polyethylenimine and  
hydrolyzed poly(vinylphthalimide) 65562-01-8P 65562-02-9DP, reaction  
products with polyethylenimine and hydrolyzed poly(vinylphthalimide)  
65562-02-9P 65562-03-0DP, reaction products with polyethylenimine and  
hydrolyzed poly(vinylphthalimide) 65562-03-0P 65562-04-1DP, reaction  
products with polyethylenimine and hydrolyzed poly(vinylphthalimide)  
65562-04-1P 65562-05-2DP, reaction products with polyethylenimine and  
hydrolyzed poly(vinylphthalimide) 65562-05-2P  
RL: **IMF (Industrial manufacture); PREP (Preparation)**  
(prepn. of)

IT 111-50-2  
RL: RCT (Reactant)  
(reaction of, with Azure B and thionine)

IT 531-55-5  
RL: RCT (Reactant)  
(reaction of, with adipoyl chloride)

IT **61-73-4** 92-62-6  
RL: **RCT (Reactant)**  
(reaction of, with dibromohexane)

IT 50-71-5 581-64-6  
RL: RCT (Reactant)  
(reaction of, with dibromohexane and adipoyl chloride)

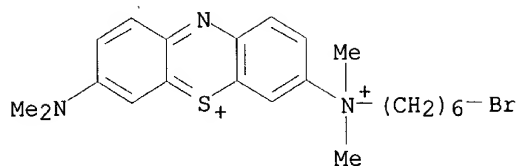
IT 629-03-8  
RL: RCT (Reactant)  
(reaction of, with thionine and methylene blue and alloxan)

IT **65544-47-0P 65544-50-5P**  
RL: **IMF (Industrial manufacture); PREP (Preparation)**  
(prepn. of)

RN 65544-47-0 HCAPLUS  
CN Phenothiazin-5-ium, 3-[(6-bromohexyl)dimethylammonio]-7-(dimethylamino)-,  
bromide chloride, compd. with 4-ethenylpyridine homopolymer (9CI) (CA  
INDEX NAME)

CM 1

CRN 65544-45-8  
CMF C22 H30 Br N3 S . Br . Cl

● Br<sup>-</sup>● Cl<sup>-</sup>

CM 2

CRN 25232-41-1

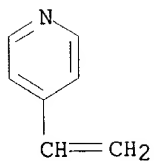
CMF (C7 H7 N)x

CCI PMS

CM 3

CRN 100-43-6

CMF C7 H7 N



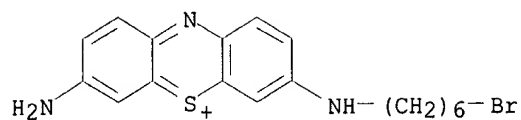
RN 65544-50-5 HCAPLUS

CN Phenothiazin-5-ium, 3-amino-7-[(6-bromohexyl)amino]-, chloride,  
monohydrobromide, compd. with 4-ethenylpyridine homopolymer (9CI) (CA  
INDEX NAME)

CM 1

CRN 65544-48-1

CMF C18 H21 Br N3 S . Br H . Cl



● HBr

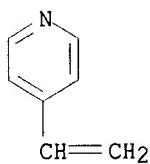
● Cl<sup>-</sup>

CM 2

CRN 25232-41-1  
CMF (C7 H7 N)x  
CCI PMS

CM 3

CRN 100-43-6  
CMF C7 H7 N



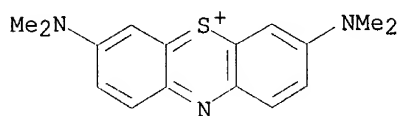
IT 61-73-4

RL: RCT (Reactant)

(reaction of, with dibromohexane)

RN 61-73-4 HCAPLUS

CN Phenothiazin-5-ium, 3,7-bis(dimethylamino)-, chloride (9CI) (CA INDEX NAME)

● Cl<sup>-</sup>